



**The Expeditionary Aerospace Force  
And  
Air Force Reserve Training**

Graduate Research Project

Michael J. Holien, Major, USAFR

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**DEPARTMENT OF THE AIR FORCE  
AIR UNIVERSITY**

***AIR FORCE INSTITUTE OF TECHNOLOGY***

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**Wright-Patterson Air Force Base, Ohio**

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Air Force Reserve Training**

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Michael J. Holien, B.S.

Major, USAFR

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## **Abstract**

Although the Air Reserve Component (Air National Guard and Air Force Reserve), in its entirety, is critically important to the success of the Expeditionary Aerospace Force (EAF) construct, this research project only addresses training issues unique to the Air Force Reserve Command (AFRC). In so doing, this document analyzes and presents the training challenges facing the Air Force Reserve as it attempts to fulfill and meet its expected role under the EAF concept. It proposes solutions that will be useful to AFRC leadership and its force planning staffs in determining how best to educate and train the reservist. Finally, a tertiary purpose of this project is to present an evaluation of the research performed, and where pertinent, to call attention to those findings which provide advances in the current state of AFRC education and training. To conduct a meaningful evaluation of the subject matter, qualitative research was conducted to gain information on AFRC expeditionary operations to date. This document is an assessment based on the researcher's own data analysis because, to date, AFRC has not systematically monitored EAF training results. Furthermore, the lack of specific measurable goals in some education and training areas could hamper future assessment efforts.

# **The Expeditionary Aerospace Force and Air Force Reserve Training**

## **Chapter One: Introduction**

*“I am very pleased to be here this morning to join General Ryan as we unveil a major restructuring initiative for employing our Air Force, becoming an expeditionary force to ready ourselves for the 21<sup>st</sup> Century” (DoD Press Brief, 1998).*

*--F. Whitten Peters*

From the moment when the Acting Secretary of the Air Force, F. Whitten Peters, and the Air Force Chief of Staff, General Michael Ryan, introduced the Expeditionary Aerospace Force (EAF) concept in August 1998, there have been questions about how the Air Reserve Component (ARC) forces would fit in. The success of the EAF has been predicated upon participation of the ARC, made up of Air Force Reserve and Air National Guard forces. “Our crews, aircraft, support personnel and their equipment are vital to the effective presentation of forces. Without the participation of the ARC, active duty units and personnel alone would not be sufficient to man and equip the Aerospace Expeditionary Forces” (Woerly, 1999).

This participation is important for two primary reasons. First, there is a desire to increase public awareness and involvement in the political decisions that send forces abroad. By increasing the involvement of reserve component forces, more of the general public will become aware of and interested in the reason for intervention. Secondly, because of the dwindling military population and the reduction in the number of active duty installations inside the United States, fewer people have direct contact with military service members. This situation poses the risk of having the all-volunteer force isolated from the general population, or worse, alienated.

The ARC plays an increasingly important role in assuring a better understanding of the need for military forces and developing support for military members within the states and communities (Meyer, 1996:29). This logic says that the more reservists are used, the more the general population will know about and discuss the contingency. They will also understand the legitimacy of sending American troops overseas in support of a contingency. The second reason is out of necessity – the active force cannot fulfill the current level of contingency taskings (Cohen, 2000:40). In any event, the Reserve component of our Air Force will continue to be tasked as heavily as its active duty counterpart for the foreseeable future.

The Air Force has changed, and today, according to the Air Force, it operates with two-thirds fewer permanent overseas bases, one-third fewer people, and a 400 percent increase in the number of deployments than it did during the cold war. These personnel cuts have forced every branch of the armed services to reexamine their roles as parts of the national security puzzle. The Air Force looked closely and found that it needed to prepare for the changing face of world dynamics. More frequent deployments throughout the world have taken their toll on the Air Force.

Signs of stress Air Force officials are citing include:

- A decline in recruiting, retention, and morale;
- less stability and predictability of deployments for personnel and their families;
- increased deployment burden on active-duty forces, due to short-notice taskings;
- increased work hours for some at home station to compensate for those deployed;
- and, increased reliance on the reserve forces to fill day-to-day tasks.

“The EAF plan is not something the USAF wanted to do, but something it had to do. Caught between declining budgets and increasing overseas commitments, the Air



Force sees EAF as a way to accomplish its missions, while maintaining its long-term investments and arresting a threatened decay in readiness” (Sweetman, 2000:1). To mitigate the effects of day-to-day requirements on its personnel, the Air Force decided to revamp the way it manages contingency deployments, instituting a more predictable deployment rotation that includes more active and reserve forces. The end result, after rightsizing its force and scaling back its presence overseas, was clearly visible. The Air Force would need to become more expeditionary.

By one of its definitions, expeditionary means “sent on military service abroad.” This is why the term Expeditionary Aerospace Force now applies so well to the Air Force for the new Millennium. Realigning and configuring itself to meet future global challenges, the Air Force of tomorrow is, like its Navy and Marine counterparts, now expeditionary by nature and turning its focus toward meeting the challenges that come with it.

The EAF embodies the Air Force vision to organize, train, equip, and sustain its total force – Active, Air National Guard, and Air Force Reserve – to meet the security challenges of the 21<sup>st</sup> Century. It addresses these challenges through enhancing sustainability, readiness, and responsiveness, and by fostering an expeditionary “warrior mind-set” (Cook, 2000:3). A fundamental objective of the EAF is to enhance the current operational capabilities provided by the Air Force to its clients – the warfighting CINCs – while sustaining a viable force that can also provide those capabilities in the future.

The EAF is about truly embracing and understanding the concepts and implications of engagement and presence articulated in *Global Engagement: A Vision for the 21<sup>st</sup> Century Air Force* (Cook, 2000). The EAF is a proactive move away from the cold-war Air Force, reaffirming the vital role aerospace power plays across the full

spectrum of conflict in support of the national military strategy. It recognizes the growing tendency to employ aerospace power frequently and over sustained periods as a part of that strategy. It also acknowledges that the demand for aerospace power is driven by its unique characteristics of range, speed, flexibility and precision. “The EAF is not a silver bullet, it is not going to fix everything,” says General Eberhart, “But it is a major step in the right direction, and it is the future of our Air Force. From all indications, we are off to a great start and we are confident the EAF is going to work” (Sweetman, 2000:5).

### **Why Focus On Training?**

When senior Air Force and Air Force Reserve Command (AFRC) leaders unveiled details for the expeditionary aerospace force in August of 1998, they spoke of a future where the Air Force would be structured to better train and respond to crises around the world. However, “one of the problems created as a result of constant and sustained deployments is the work load that remains at home when forces deploy” (Ryan, 1998). The following abstract from a recent Air Force Times article is a case in point.

An investigation into why the wing of a parked C-141 Stratolifter broke apart last December tells a sobering story of what happens when a high operations tempo is mixed with a work force stretched thin. The left wing of the 41-year-old jet fell to the ground December 21 while the plane was sitting on the flightline of the 164<sup>th</sup> Airlift Wing in Memphis, Tenn. At the time, the plane was being prepped for a cross-Atlantic flight.

An Air Force accident investigation board blamed the mishap on three 164<sup>th</sup> enlisted maintainers who reportedly did not follow instructions while repairing a fuel leak in the wing earlier that day. In a broader view, the investigation revealed a maintenance force that was stretched thin in experience and numbers, and working long hours to support a 300 percent increase in flight hours.

The investigation board chairman noted that if the airman assigned to repair the leak had followed the repair technical orders and accounted for every tool, the accident likely would not have happened. The chairman also faulted a senior non-commissioned officer who should have

inspected the airman's repair. The senior non-commissioned officer acknowledged that he did not fully understand the repair procedure when he checked off that the airman had completed the job.

The wing and Air Mobility Command have made several changes since the accident to include a major change to the wing's deployment schedule that was in the works before the accident. The airman recalled to investigators the maintenance demands this way: "...with almost half of our personnel in Germany and the other half fixing to go on that flight...we were all stretched to the limit, really."

Today the wing still deploys to Germany, but only every other month. Having more time at Memphis boosted the number of experienced maintainers available and allows the wing to do more repairs at home. The wing also revised work schedules to better balance the airmen's experience levels and stressed the need to follow by-the-book Air Force technical orders and other instructions.

Air Mobility Command officials were unavailable for comment about what measures AMC is taking in the wake of the accident (Rolfsen, 2002).

The remainder of this document will address these and many more issues regarding one of the most important parts of Air Force doctrine – namely – training.

### **Research Question**

Is the Air Force Reserve effectively trained and prepared to deploy in the Expeditionary Aerospace Force construct?

## **Chapter Two: Literature Review**

In an attempt to gain a better understanding of the Expeditionary Aerospace Force and Air Force Reserve training topic, the researcher conducted an extensive review of the literature and the training resources currently available through varying sources. From this, the researcher was able to identify key issues, and gain an awareness of relevant research that had already transpired. The following rundown of major themes is intended to provide the reader with a comprehensive catalog of understanding for their professional training tool kit.

### **Synopsis**

Program Action Directive (PAD) 99-01 is the coordinated direction to implement the EAF. The EAF concept addresses individual and multiple contingency requirements of varying size, complexity, and duration. These contingencies and crises can occur with little or no warning and at times may evolve into a lasting national commitment. Contingency operations range from humanitarian, non-combat in scope, to conflict avoidance or peacekeeping, up to the initiation of major theater war (MTW). The EAF provides a more capable, tailored force to a CINC while offering greater integration of the Air Force Reserves. EAF efforts also provide for a better-structured, more predictable approach to scheduling which offers stability for all deploying personnel. This integration of operational and supporting efforts maximize personnel utilization and assist in the retention of a more diverse, all volunteer, motivated, and professional force.

This renewed expeditionary approach was developed through a refocused look at the roots of history and traditions of air power. It is further embodied in the core competencies of the Air Force and the USAF's central mission of providing timely and responsive land and space-based aerospace power. In turn, it helps to implement the key

concepts found in Joint Vision 2010, and it reflects the lessons learned from the recent use of air expeditionary forces we have deployed for other short duration missions.

The Expeditionary Aerospace Force is a fundamental and evolutionary change for the Air Force, which represents a shift to an expeditionary warrior mind-set and a new Air Force vision (Ryan, 1998). In order to achieve this, the Air Force reorganized its forces into new teams called Aerospace Expeditionary Forces (AEFs).

*EAF enables the full utilization of Aerospace Power for the 21<sup>st</sup> Century*

***“EAF is what we are, AEF is what we do”***

*--General Ryan*

The lethal air forces were divided into 10 AEFs and arranged in a schedule for deployments that send two forces forward at a time. Each AEF is composed of a cross-section of Air Force weapon systems, 150-175 aircraft, and 10,000 to 15,000 men and women. Because an AEF is a Total Force organization, it includes many types of aircraft and personnel drawn from active duty Major Commands (MAJCOMs), the Air Force Reserve Command, and the Air National Guard. From these, the Air Force is readily able to deploy the tailored-to-need forces requested by theater commanders. Across the first ten AEFs there were about two ARC aircraft per cycle. It therefore takes approximately six ARC fighter squadrons to roughly equal one active duty squadron (Hicks, 2000). Furthermore, ARC units are difficult to task, and they cannot remain on active duty for extended periods of time because of the rules governing their activation and employment. This issue will be discussed in further detail later on in this document.

An AEF consists of geographically separated, virtually linked units consisting of more than wings/squadrons of combat aircraft. It includes people and equipment that represent a cross-section of Air Force combat and mobility aviation, as well as Expeditionary Combat Support (ECS) capabilities. The ECS resources aligned to each AEF include forces necessary to establish continuous operations at active airfields or austere forward locations, such as security forces, communications, civil engineering, medical teams, fire fighters, transportation, and maintenance. These AEF force elements fulfill a 90-day “on call” period every 15 months so they know when they are in the window for deployment, when they are training, and when to prepare for the “on call” rotation. When deployed, these wings, groups or squadrons align to the joint command.

*“Airmen from all across the Air Force contribute to our ability to deploy and sustain powerful aerospace capabilities whenever and wherever necessary.”*

*-- Air Force Vision 2020*

### **Expeditionary Aerospace Force Management**

At its foundation, the EAF is about the structural and cultural changes within the Air Force that create more effective force management tools. A key objective involves understanding what the limitations of Air Force Reserve resources are and how over committing them to meet requirements today can result in less capability to meet essential requirements tomorrow.

Adverse costs are incurred any time assets are surged and tasked beyond their own sustainability levels. Planning for reconstitution must begin simultaneously with the

Comment: What are trigger points?

start of surge operations because reconstitution efforts continue beyond the end of the contingency operation. Factors to consider in reconstitution planning include the levels of training lost, and the impact of personnel retention and attrition rates across the Total Force. There are no residual USAF forces. If we do not protect our train, organize, equip, and sustain forces during engagement, we aggravate the impact with reduced readiness in the future (Cook, 2000).

EAF structural changes enable more responsive force packaging, better visibility into force “tempo,” and better detection when the force is stressed so that relief can be applied to the stressed areas in a timely manner. The most visible example is the organization of combat and ECS forces into standing AEFs. As already discussed, these structural changes provide the Air Force Reserve with a force management tool that better addresses readiness, quantifies tempo impacts, and guides investments.

EAF cultural changes involve how we recruit, train, nurture and retain our Airmen and how we structure, manage and invest in the force. Airmen need the training and the skills to excel in the expeditionary world, as well as the stability to pursue a rewarding personal life. This is a major task still facing the EAF. Many processes that AFRC uses to grow and manage these expeditionary airmen have slowly evolved to the reality that recurring expeditionary rotation and contingencies are part of normal Air Force operations. Over the past eleven years, most airmen have come to understand this reality. However, since our systems have not adapted, the skills and resources our airmen need in deployed environments remain unaligned (XOPE, 2000).

Training must adapt to this environment. Training must involve subjects like self-aid buddy care, basic survival skills, and combat arms for airmen who live in ‘field’ conditions on a recurring basis. Airmen must understand what makes aerospace forces

expeditionary and how to make them more expeditionary. The Air Force must learn how to measure, limit and sustain long-term engagement (steady-state contingencies); how to quickly transition to surge operations up to and including MTW levels of effort, and then smoothly reconstitute back to sustainable engagement.

The most talked about change under EAF is the AEF and the construct by which a pair of AEFs defines the level of deployment that our combat and combat support units can sustain. A pair of rotating, aerospace expeditionary wings (AEW), one of which is on call at any given time, provides the punch in our crisis response capabilities.

AEF force management looks beyond simple aircraft counts to measure tempo by addressing the many deployments that involve only ECS resources. We also try to include metrics for the number of forward operating locations, which can stress some forces just as much as the number of aircraft deployed. A paramount objective, then, becomes controlling home base tempo because it is critical to long term retention and readiness.

AEF force management also complements two existing tools for deploying forces. First, Air Mobility Command (AMC) uses mobility commitment lines to control and measure the tempo of tanker and airlift forces. Secondly, both the Air Force and the joint community use Global Military Force Policy (GMFP) to measure and attempt to control the demand for our low density/high demand assets such as the airborne warning and control system, U-2, and special operations aircraft.

Finally, although not specifically addressed by these management tools, nondeploying capabilities remain critical to expeditionary operations. Fixed assets that provide support to deployed forces, such as satellite control stations, logistics depots,



intelligence production centers, and long-haul communications are vital to reducing the footprint required to deploy forward.

#### **Air Force Reserve Under the Expeditionary Aerospace Force Construct**

Obviously there were many questions about how the reservist would be employed as part of an AEF. The answers have shown that it was not business as usual because the idea of sourcing and tasking manpower billets as unit type codes (UTC) rather than individual augmentees came into being. This feature allows a theater commander to request a capability rather than a specific unit. Each MAJCOM, including AFRC, has functional area managers participating in the process. “The goal is to populate the ten AEFs with the same type and number of UTCs, in all functional areas, drawing from the UTCs actually assigned to the ten lead wings, all sister wings, Air National Guard, and [Air Force] Reserve wings, and all remaining USAF wings assigned to support UTCs” (Foard, 1999). This strategy directs the functional area managers to “maximize the use of UTC taskings...without decimating home-base capabilities. Home station units must be able to continue meeting their training and support missions” (Foard, 1999).

In addition, the EAF will improve the way the Air Force trains, Ryan said. “Because Air Force people will know well in advance to what air expeditionary force their unit is attached and when that AEF is scheduled to deploy, they will be able to plan for and train with other units in their AEF prior to deployment. Before, units trained with other units, but not necessarily the units they would deploy with” (Ryan, 1998).

The AFRC AEF Cell was established to assist home station units in managing this enormous scheduling challenge. The Cell receives information concerning various AEF requirements from the Air Force AEF Center at Langley AFB, and disseminates it to all of the Numbered Air Forces and units in AFRC. The Cell then, working in the opposite

direction, takes information from the units, such as shortfalls, complaints or problems, and forwards it to the AEF Center. The AEF Cell's primary role is to get the latest, most up-to-date information from the Center and other Major Commands and send it to all Air Force Reserve Commands units.

Looking in-depth at the typical AEF rotation cycle, the 15-month AEF rotation cycle begins with a 10-month training period. During the training period, the AEF may participate in major composite force exercises, Joint Chiefs of Staff (JCS) directed exercises, or operational readiness inspections (readiness inspections may also coincide with operational deployments for individual AEF components). Approximately two months prior to deployment, the AEF begins their preparation period that focuses on events to ensure maximum readiness for deployment or any on-call taskings expected during the next 90-day eligibility period. During this preparation period, the AEF will be protected from those tasks that do not focus the AEF on tactics, techniques, and procedures that contribute to unit readiness as expected for the specific area of responsibility (AOR). Following preparation, the AEF units enter a 90-day deployment eligibility period. During this time, the units may be deployed in support of steady state rotational requirements or remain on-call. The 90-day eligibility period is followed by a short pause period of relaxed operations (as determined by the MAJCOM) at home station. The AEF then repeats the cycle. Reference Figure 1, Page 79.

PAD 99-01 recognizes the case that AFRC personnel have limits upon their participation in an AEF. During each AEF cycle, one or both AEFs will have force elements provided by AFRC units. AFRC fills the 90-day commitment, or portion of a rotation, by teaming units, personnel, and shared equipment. Specific methodology for

meeting this objective is managed by AFRC and is discussed in further detail later in this document.

In support of these requirements, volunteering AFRC personnel serve a minimum of 15 days in theater, rotating no more than six times during a 90-day tour IAW Title 10, Section 12301, paragraph (d), which requires the consent of the member. On the other hand, AFRC members who have not volunteered may be ordered to active duty for not more than 15 days a year IAW Title 10, Section 12301, paragraph (b). This authority will be used only after recommendation by and coordination with the applicable AEF scheduling functions at HQ AFRC to reinforce the use of volunteers. In addition, AFRC members may be involuntarily ordered to active duty for longer periods of time pursuant to other specific statutory authorities.

This means that AFRC must identify as many as six volunteers for every 90-day position that they commit to fill. In addition, to ensure that the reservist's participation in contingencies does not preclude their availability for annual training, AFRC has set a goal of one deployment every 45 months (or once every third cycle). While this ensures that reservists are not continuously deploying overseas to the detriment of annual training, this ceiling makes it even more challenging for the reserves to commit substantial forces to AEF rotations because it reduces the number of personnel available in each AEF.

Reservists are encouraged to participate in the AEF through the use of their annual tours. Tours may be extended with the concurrence of the member, and coordination of their home unit. Therefore, with 15-month AEF cycles, reservists do not always participate in an AEF every annual tour. Pay and allowances for AFRC support of an AEF will be through military personnel appropriation. The gaining command will

provide an active duty Operations & Maintenance (O&M) fund cite for the travel and transportation. Pending HQ AFRC approval, AFRC supervisors and/or more senior positions serve at least 30-day tours. AFRC functional managers direct the rotational flow of reserve units into and out of the AEFs during the 90-day period (Pfeil, 1999).

However, due to their part-time status, the reserves' participation in AEFs is different than that of their active duty counterparts. Based on a resourcing conference held before the beginning of each Expeditionary Force cycle, AFRC reviews the theater commanders' requirements and determines the number of aircraft they will commit to the rotation and the number of qualified reservists available to fill the commanders' requirements. According to AFRC officials, the factors considered in these determinations include training status, certification status (if required), prior deployments, and volunteer status. The size of each commitment depends largely on the number and size of the Reserve units aligned with the AEFs. For example, Reserve participation was about six percent of the total combat support requirement for AEFs 3 and 4, which were deployed between December 1999 and February 2000 (O'Connell, 2002). This was only the second deployment for AFRC under the Expeditionary Aerospace Force Concept.

#### **Air Force Reserve Operational Training Challenges**

AFRC faces two challenges that require long-term solutions. The first is to provide a sufficient number of trained personnel in certain specialty areas such as cargo handlers, fuel specialists, and security personnel, where the need for these skills is high but the availability of qualified personnel is low. This could be accomplished by reallocating existing personnel. The second challenge is to better match AFRC aircraft capabilities with their increased role in contingency operations. According to AFRC

officials, this is a significant change for both reservists and theater commanders, particularly for reserve support forces, since the Expeditionary Aerospace Force Concept requires them to ramp up from virtually no deployments to meeting as much as 10 percent of theater commander requirements. AFRC training is often designed to meet basic requirements, and if the CINC's requirements exceed this basic training level, they further limit the availability of reservists.

Additionally, AFRC officials consider upgraded and modernized capabilities essential if they are to be used to meet high-demand contingency requirements, such as the delivery of precision-guided munitions. The reserves are closely monitoring some aspects of their participation in the EAF Concept, such as the number of positions they agree to fill in certain specialties. However, they do not systemically collect and monitor other data that is critical to meeting their commitments under the EAF Concept, such as the extent to which reservists are willing to volunteer for overseas deployments. In addition, research indicates that the Air Force is not systematically monitoring the impact of reserve force participation on the reserve forces themselves.

In an interview, Air Force Reserve Chief Lieutenant General James E. Sherrard, III, discusses how the Reserve is impacted by the Expeditionary Aerospace Force and the critical role the Guard and Reserve will play in the overall success of the EAF concept. "We believe EAF gives Air Force Reserve Command a very good road map. It will give us the predictability and the flexibility to do the things we are asked to do. EAF will give us stability and the predictability to say in advance which units will be next in line. The rest of their schedules, training and other commitments will be built around that. I certainly think it will make life for our Reservists much easier" (Stanley, 1999:16).

“And this is not all that new for us in the Guard and Reserve because Aerospace Expeditionary Force is very similar to the way we have done business for years. We had to take a long-range look to ensure that our training schedules were established in advance and we had some stability. What EAF will do now is help us and the active force add predictability to their schedule, which is important because we are going to be mixed in with them on deployments” (Stanley, 1999:16).

To fix the stay-at-home work load, we estimate a plus-up of approximately 5,000 active-duty manpower authorizations,” Ryan said. “We are currently in the process of identifying programs and corresponding manpower resources that will fund the increase in authorizations without increasing Air Force active-duty end strength” (Ryan, 1998).

While the EAF will provide more structure to the day-to-day activities of the Air Force, “all bets are off if the big war comes,” Ryan said. “EAF does not change our support for major theater war. In the event of a major theater war, the Air Force defaults to the theater commander’s standing war plans. People and forces will deploy to where they need to go, for as long as they need to stay” (Ryan, 1998).

The general said he believes the EAF will ultimately improve the way the Air Force uses its reserve forces. “The Reserve has always been a vital part of our total force,” he said. “The Air Force uses its Reserve forces in a very effective way and reservists integrate seamlessly with our active-duty forces. We want to make that even better. The EAF will allow us to do that and use the great people in the Guard and Reserve. We want to use all the great expertise out there to be part of this total force, this Air Force family of ours” (Ryan, 1998).

### **Historical Implications of Air Force Reserve Training**

Following World War II, the purpose of the Air Force Reserve was simple – to augment the active Air Force in times of national emergencies or as otherwise required. There was no requirement for quickness because it was believed that the Nation would have time to conduct a measured and well-articulated mobilization. While the active Air Force held an adversary at bay, the reserves were trained and readied. Consequently, the early mission of the Air Force Reserves was to maintain proficiency in simple, general skills not related to any combat mission. For example, pilots maintained simple “stick and rudder” proficiency.

The Korean War changed the purpose that the active Air Force wanted the Air Force Reserve to fulfill. Consequently, after the Korean War, the purpose of the reserves was augmentation, plus, the ability to do that immediately without delays for training, or adding manpower and equipment. The mission now became one of preparing a combat capable force in support of active duty forces as rapidly as possible.

The mobilizations of the sixties proved that the Air Force Reserve was capable of providing combat ready forces in a timely manner to augment the active force during national emergencies. So impressive were their capabilities, that planners began to take advantage of the newly discovered combat capabilities in the reserves. If they were helpful in times of emergencies, why not harness all that talent and use it to help the active forces during peacetime? That rationale, coupled with fiscal shortages, and innovative philosophies of management embraced by senior defense leaders (i.e. MacNamara), led to a new complexity of purpose and mission embodied in the term “Total Force.” This quick review brings us to the present, and hopefully re-emphasizes

how complex the purpose and mission have become for AFRC since 1946, (Wilson: 1985).

### **Air Force Training Primer**

Air Force training, in general, is an extensive and expensive operation. Almost all of the thousands of individuals who enter the Air Force each year undergo some type of technical training for their Air Force specialty, and most receive some type of advance technical and military training at various points in their careers. Such training is provided in a number of different settings; e.g., in resident technical courses, in training detachments, via correspondence courses, or through on-the-job training (OJT). Decisions, which influence training outcomes, are made by a number of Air Force agencies responsible for personnel utilization, training, and operational readiness.

Similarly, as a primary mission, training has become one of the most pervasive and necessary activities conducted within the Air Force Reserves. It supports, at some stage, almost every function or operation carried out by reserve personnel. As such, it accounts for a significant portion of AFRC personnel costs and man-hours.

### **Expeditionary Aerospace Force Education & Training**

The official Department of Defense (DoD) Dictionary - 2001, defines operational readiness as “the capability of a unit/formation, ship, weapon system or equipment to perform the missions or functions for which it is organized or designed.” Hence, a distinguishing feature of this research project is the application of this concept to the EAF/AEF constructs.

Annex N, HQ USAF PAD 99-01 (August 1999), specifically addresses the education and training activities necessary to implement the EAF. Its overarching objectives were to describe how education and training would help establish and maintain



the structure, culture, and operations of an Expeditionary Aerospace Force with the primary focus on evolving culture and warrior spirit. It was also charted to determine what differences the EAF would require from existing policies, programs, course content, timelines for course development or material change, and that resources would match requirements.

To do so, the Education and Training Annex made the following assumptions:

- Deploying AEF specialties will require different proportions of people than do existing Air Force Specialty Codes (AFSCs).
- Deploying AEF specialties will need additional skills that may expand existing course curricula.
- Deploying AEF organizations and operations may require sets of skills that will result in entirely new courses.
- Remaining support forces may need additional skills to support AEF operations.
- EAF implementation resources will be matched to education and training requirements.
- Education and training requirements and resources will be given priority to ensure the AEF attains required certification.
- Education and training requirements that will improve the efficiency and effectiveness of the EAF will be resourced by the following education and training concept of operations each fiscal year:
  - Identify the mission driven requirement while considering the skill level for each AFSC, end strength required, and retention/re-enlistment rates to determine the steady-state training rate.

- Size the schoolhouse, instructors, equipment, etc., to the steady-state training rate and program the cost.

At the most basic level, USAF wings and squadrons are designed to produce two overarching and intimately connected outputs related to readiness. The first output is the ability to produce and provide military capabilities through operational readiness today. If a wing had an AEF rotation right now, how well would their capabilities match up with the demands required by a CINC? Are the right numbers of personnel trained appropriately? Is equipment in good working condition (i.e. function of training) with an adequate level of supplies? Can the requisite number of effective missions be generated?

It is important to note, that to date, deployment predictability has been weakened, according to Air Force Reserve officials, because some reservists scheduled to deploy have been disqualified by special training requirements (GAO, 2000:17). The reader is cautioned to keep this in mind while reviewing the remainder of this document.

The second output is the production of future capabilities. While usually receiving less attention, this output is equally important, and this project will focus on these activities because they tend to be addressed less directly in planning and programming. As units are deployed to support EAF operations, they must trade off building future capabilities for providing current ones. The longer this continues, the more the units must postpone or scale back upgrade training.

To illustrate some of the complexities of resourcing and managing the two intimately connected tasks assigned to expeditionary units, let's look first at pilots. It is clear that operational capabilities are produced through training sorties. The embedded task is represented by the requirement to flow pilots through the personnel inventory from a low to high skill level. Beginning from the time the inexperienced pilot reports to

the unit after undergraduate pilot training, and possibly after some time with a field-training unit, the operational unit must expand the required skills of each individual. After completing a brief period of mission qualification training, the new assignee becomes an inexperienced combat mission ready pilot.

The inexperienced pilot becomes experienced by stepping through specific training events and flying hour combinations. At certain points in a flying career, the pilot may also become an instructor pilot, flight lead, and/or mission commander. Throughout this time, an expeditionary unit may lose its pilots (both experienced and inexperienced) through reassignment or separation from the organization.

A similar picture can be shown for aircraft maintainers. The requirement to flow people through the personnel inventory from a low to high skill level exists for pilots and maintainers alike. New maintainers are assigned to units out of technical schools as mission ready technicians and designated as 3-levels or apprentices. Through a combination of OJT, formal study, and promotion, 3-level apprentices attain 5-level journeyman status and go on to become 7-level craftsmen and 9-level managers. The 5-level and 7-level maintainers serve as teachers for the more junior 3-levels. Thus, there is a strong parallel between pilot training and maintainer training within any expeditionary aerospace force.

At this time, the USAF does not adequately articulate how the requirement for trainers changes when experience mix and sortie demands change. Therefore, it is very difficult to estimate just how much total manpower must change when there are unexpected separations of senior personnel. The Air Force has not yet been able to quantify the impact of the falling experience mix among maintainers, as RAND has been able to do for pilots. Precise quantification of the total impact will be impossible without

further detailed work on the practical issues of what drives retention rates of experienced personnel, how long train-up times are for various Air Force specialties, and what the productivity differential is between junior and senior personnel (Dahlman, 2000:13).

Consequently, the necessity to continuously recreate skilled assets that are lost when people leave the unit or the Air Force drives a requirement to have people at all skill levels. It is not sufficient to have only the most senior, most skilled people flying the sorties and maintaining the aircraft, for when they leave, as they all do sooner or later, a quality replacement must be available. Thus, a healthy unit, and a healthy AEF, is one that is composed of an adequate number of people at all skill levels, from entry level to the highest possible level.

When this fundamental condition is not recognized, resources allocated to units are underestimated and very difficult trade-offs have to be made at every force management level. When resources are limited, a tension between sortie production for pilot training and maintainer training develops. The challenge of wing and squadron leadership then is to forge a delicate balance between these two activities.

Operational capabilities are produced through training sorties for the pilots and maintenance activities that keep the planes mission-ready. Wings continuously act to keep both the human and the physical capital healthy through properly managed recycling of skills and properly maintained equipment. Newly assigned pilots and maintainers attain skills and proficiency through OJT in their units under the tutelage and supervision of experienced personnel. Aerospace expeditionary forces then, must manage and produce the entire inventory of skills that make up a crucial element of all expeditionary aerospace force “human capital” resources.

Similarly, commanders have a requirement to maintain and rejuvenate their human and physical capital concurrent with their requirement to meet operational demands. These demands include exercises, inspections, contingencies, and expeditionary deployments. Furthermore, commanders face a serious challenge maintaining a stable training and maintenance schedule in the presence of these demands. Besides EAF commitments, contingency deployments in particular may spring up with little notice, thereby hampering the ability of the unit to strike a balance between these two requirements.

With this discussion of a unit's production of future capability as a background, let's turn to the task of defining what characterizes a healthy AEF. A healthy AEF maintains a sufficiently high number of training sorties to sustain an experienced mix of pilots, while simultaneously providing adequate training to sustain an appropriate maintainer experience mix. A healthy AEF also meets its major theater war and contingency requirements; however, the focus in this document is on characterizing health as it relates to an AEF's preparedness to perform its EAF operational taskings.

Characterizing a healthy AEF means setting standards that the AEF and its components must meet. Without the right standards, it is impossible to define the metrics that will signal when training and readiness has fallen enough to drive management action. When it comes to what this document regards as a critical AEF tasking, the requirement to produce future capabilities through the rejuvenation of lost skills becomes quite challenging. Often, standards and metrics for training and manning in particular are stated but incomplete, or they are lacking because the attendant activities are difficult to quantify.

In defining a healthy AEF, this paper concentrates on the training of flying and maintenance units. At this point, this analysis does not attempt to set standards for manning or training of personnel in other AEF components. For the purposes of this document, the standards that must be set for the materiel processes relating to equipment, maintenance, and supply have also been left aside. With regard to personnel training inventory standards, the following guidelines are suggested:

- Sorties required to maintain a healthy pilot experience mix;
- Sortie utilization and aircraft availability rates to sustain these sortie levels;
- Maintenance manning needed to generate the sorties over the long term; and
- Maintainer experience mix to provide adequate OJT over time.

To summarize, every AEF faces a mismatch between the tasks it must accomplish and the resources at its disposal. The turbulence that accompanies systemic shortfalls and operational demands in the form of split operations will continue. A stable EAF cycling environment is necessary to help alleviate these problems. Even with such an environment and the resources to support it, one should not assume sustained health. The guidelines suggested in this document begin with establishing what a healthy AEF should comprise. The focus on setting the right standards is critical to assessing the readiness of the force. Without the proper standards and the right metrics for tracking how AEFs are capable of meeting those standards on a day-to-day basis in executing their mission, senior management will never be able to identify and assess adequately what shortfalls in readiness exist throughout the expeditionary aerospace forces.

The Air Force must safeguard the forces that accomplish the Title 10 task to train, organize, equip, and sustain. MTW plans often assume that the Air Force will surge these forces forward and recover them later. However, under the stress of multiple

rotational deployments, such a surge becomes counterproductive. Using these forces for deployments interrupts sustainment actions on MTW capabilities and delays efforts to recover, refurbish, and retrain the redeploying forces. This hidden cost of doing business is often overlooked, and as shown above, becomes extremely important to sustaining a viable, well trained force.

### **Current Training Initiatives**

#### **Distance Learning (DL)**

The Air Force's DL program continues to have unmatched potential to provide quality instruction at the right place at the right time. Air Force readiness to accomplish its time-critical EAF mission is directly linked to its ability to educate and train its airmen. Since all services have reduced their force structure, the Air Force and the Air Reserve Components will require the best educated and trained airmen to execute the core competencies of Air and Space Superiority, Global Attack, Rapid Global Mobility, Precision Engagement, Information Superiority, and Agile Combat Support in all EAF environments. Additionally, these warriors need an in-depth understanding of joint and coalition operations. Today, Distance Learning has joined traditional classrooms in fulfilling the core mission of Air Force EAF education and training.

With the advent of Information Age technologies, the Air Force's education and training system has found that it best serves the warfighting commander – and the taxpayer – with an increased emphasis on Distance Learning. Although the Air Force education and training system will always retain many of its traditional classrooms, the instructional and organizational structure has shifted to Distance Learning because DL can address a multitude of issues ranging from EAF readiness to saving tax dollars. These issues include supporting the special AEF training needs of the Air Force Reserve.

Training for an AEF deployment presents a complex challenge for the Air Force Reserve. By the very nature of their part-time status, 74,700 Reservists have less time for training than their full-time active duty counterparts; yet, the requirements for both are essentially the same (O'Connell, 2002). Many Reservists hold a full-time job, which makes it difficult to attend formal resident courses that can range from a few days to months in duration. Appropriately selected formal and informal courses, converted to DL format, and tailored to meet the time, availability, and access needs of AFRC have advanced toward solving the training challenges associated with AEF preparation. DL is a way for AFRC to increase force readiness by providing geographically dispersed personnel better access to training (Lord, 1999). Distance Learning has shown itself to be one way for the Air Force and the Reserves to continue to deliver training to airmen who cannot come to centralized training sites.

#### **Aircrew Training Modernization Programs**

In the past, the Air Force's new aircrew training philosophy had been to conduct training in the aircraft. Aircrew Training Devices (ATDs) were primarily used for emergency procedures training and the practice of those skills that could not be performed in the aircraft for safety of flight considerations. In the past, this philosophy provided the Air Force with well-trained aircrews that were fully mission-ready. This situation has changed radically. It is now very attractive for the Air Force to invest in modern flight simulation technology and to conduct more aircrew training in ATDs.

AFRC shares the concerns of the active duty regarding flight-training hours in the aircraft being traded off for flight-training hours in flight simulators (GDR, 2002). The critical and pivotal issue involving simulator training versus actual aircraft training is how much training can be confidently conducted in the simulator without risking mission



capability. The answer lies somewhere along a continuum defined by the extremes of training only in the aircraft and training only in the simulator. Neither extreme is satisfactory. Training capabilities that may be achievable with modern flight simulation technologies must be cautiously evaluated on a case-by-case and weapon-by-weapon system basis. Differences in flight simulation and training philosophies among active duty components reflect differences in their missions and the ability of available simulation technologies to support their unique training requirements.

In today's Air Force, AFRC flies the same aircraft and trains to the same standards as the active duty components. In some cases, AFRC aircraft are newer and more modern than those in the active duty inventory. AFRC now has some compelling reasons to program and budget for state-of-the-art ATDs. AFRC has evolved to become a full partner in the ATD procurement and training system development process with both the active duty MAJCOMs and the Air National Guard. HQ USAF/REO and HQ AFRC/DO/XP are working closely to coordinate, develop, and manage weapon system specific aircrew training modernization programs.

AFRC operates aircraft and conducts missions gained from Air Combat Command (ACC), Air Mobility Command (AMC), and Air Force Space Command (AFSPC). AFRC has established a balanced approach to flight training that reflects differences between the respective training and simulation philosophies. The goal of AFRCs flight simulation and training program is to enhance and maintain combat skills and flight safety by improving emergency procedures; by improving procedural skills; by providing mission rehearsal; by developing and validating tactics and techniques; and by preserving our nation's assets (GDR, 2002). AFRC will consider savings by offsetting flying hours and training with high-quality simulation only with a confident assessment

that no loss in training capability or mission readiness will occur. AFRC will continue to coordinate these activities with both the MAJCOMs and the ANG.

### **Distributed Mission Training (DMT)**

The importance of the realism of flight simulation and its relevance to surviving air combat, has gained new insight. The Air Force is pursuing new ways to train its operational aircrews. DMT is an area the Air Force thinks holds great promise (GDR, 2002). Using state-of-the-art simulation technology, DMT permits aircrews to train in synthetic battlespace, connected electronically to other aircrews at distant air bases. Importantly, DMT delivers this enhanced training from home station, helping the Air Force limit the amount of time airmen spend deployed and facilitating the training of USAF aerospace expeditionary forces as they prepare for deployment to global crisis zones.

Recently there has been some confusion about what DMT really means, so General Hawley, Commander, ACC, proposed a name change to Distributed Crew Training. This, along with another step in this concept called Distributed Staff Training, has been planned. Each of these concepts is capable of supporting one another; however, they are two very different training initiatives (Hawley, 1999).

Distributed Crew Training will be able to take advantage of some of the modern technologies that are emerging today that can give our Air Force the opportunity to train in a synthetic environment with enough realism so that they can replicate the kind of training that we used to think could only be done in the air. This realism will allow us to overcome some of the constraints that face us today such as: access to airspace and ranges; the ability to provide robust adversary forces; the ability to imitate threats on the ground; and the constraints in the ability to mix joint and combined forces together.

Let us look at an AEF in terms of a virtual organization made up of eight to ten different squadrons from across the Air Force. The AEF is made up of earmarked ground control people, combat communications, Red Horse, and Prime Beef (Civil Engineering) teams all of which are essential to deliver combat power to the CINC. The Distributed Staff Training environment would allow them to prepare for their task without having to incur the hardships of deploying someplace in order to work together in a specific theater location. These concepts have a tremendous future (Hawley, 1999).

Historically, the first element of the DMT program got underway with a contract award to Boeing for an F-15C full-mission trainer (FMT). This is a high-fidelity aircrew trainer designed to operate as either a stand-alone squadron based device, or with up to three other FMTs for two-ship, three-ship, or four-ship operations. When networked with other FMTs, the capability to train like you fight becomes a reality. Missions are briefed, flown and debriefed with up to four FMTs in a single sortie allowing aircrew to train for expeditionary aerospace force operations. Colonel Lynn Carroll, the USAF's warfighter training research division's visionary chief, adds: "We need to remember that war, combat, peacekeeping operations other than war, all the way down to training are really about warfighter decision making. Whoever makes the best decision, the quickest, is going to prevail" (GDR, 2002).

#### **Chief of Staff, US Air Force Logistics Review (CLR)**

Our operational needs have changed with EAF objectives, yet the processes to support them have remained largely unchanged. "We simply adapted old processes to new concepts. Without a doubt, we have the most capable Air Force in the world—manned with the finest—and given a job to do, our logisticians will always succeed. However, it is time to rethink the processes and match our support to current operational

concepts (Zettler, 2000). CLR is aimed at doing just that. The CLR recommendations are all about restoring the emphasis on policy, procedures, training, discipline and enforcement to improve our EAF readiness.

The Chief emphasized keeping turbulence at a minimum by concentrating on the most feasible wing-level process improvements and evaluating options by how they affect EAF implementation. Over the course of the study, the emphasis on EAF objectives led to the following expected impacts.

- Stabilize flying-hour program execution.
- Continue officer development for both logistics and rated officers.
- Instill same level of concern for fleet health as for sortie production.
- Produce a more professionally trained and capable force.

The primary focus area of the CLR is training and officer development. Better training, including cross-utilization training and training in agile work force tasks that are mission design series/AFSC specific, can help realize more efficient use of personnel. The Air Force would benefit if more 3-level personnel could deploy for expeditionary operations. This would reduce the stress of excessive deployments for more senior personnel and help maintain the proper seniority mix needed for OJT of 3-level personnel at home bases. A process to accomplish this should consider 3-level maintenance upgrade training at such locations.

In general, maintenance efficiency could be improved with better policy enforcement. This requires training in the importance of the policies and in methods of ensuring their enforcement. Specific areas where better enforcement is needed include maintenance documentation, quality assurance, and technical orders. The initiatives

resulting from the CLR are designed to create a core logistics capability enabling the EAF to respond quickly and conduct sustained operations anywhere in the world.

Realizing that potential, however, depends on Air Force recognition of the importance of balancing current day requirements with future needs. The CLR recommendations are aggressive, but they are tempered by a cautious approach to implementation. Overall, the review can help ensure the initiatives are steps in the right direction. However, the full impact of these initiatives will not be realized for years (Zettler, 2000).

### **Expeditionary Aerospace Force Training Resources**

There is a wide array of tools available to the commander for planning purposes covering everything from deployment preparation through redeployment. This is not an all-inclusive listing nor should it be a substitute for experience or sound judgment. The primary site for information is the Aerospace Expeditionary Force Center (AEFC) homepage (<https://aefcenter.acc.af.mil>). This site contains links to AEFC pages covering the following sections: EAF Online, Lessons Learned, Upcoming Events, Past Events, Lead Wing, Mobility Wings, AEWs, AEF Information, Readiness, Research Gateway and Links of Interest are the primary topics on this homepage. This homepage can aid immeasurably in deployment preparation and in AEF operations in general.

### **Aerospace Expeditionary Force Center**

The US Air Force Aerospace Expeditionary Force Center is located at Langley AFB, VA. The center serves as the premier agency for implementing the Air Force's EAF Concept. The Air Force AEF Center plans, configures, schedules, prepares and assesses aerospace expeditionary forces enabling the delivery of versatile and responsive aerospace power while providing the Air Force with stability and predictability. The

center employs about 165 personnel to include the ARC, and DoD contractors. Its personnel cover a wide range of Air Force Specialty Codes and serve as the primary points of contact for diverse AEF issues and concerns.

The AEFC is composed of three divisions. The Aerospace Operations Division provides integration of all air and space assets dedicated to contingency operations in worldwide support of regional CINC requirements. The Aerospace Expeditionary Combat Support Division synchronizes MAJCOM and Air Force level counterparts on all combat support initiatives supporting the expeditionary concept to include: UTC building and sourcing, training requirements, base support and time-phased force deployment and redeployment planning (TPFDD). The Aerospace Expeditionary Plans Division is responsible for planning, analyzing, preparing and providing assistance in assessing EAF strategic initiatives. For additional information, the center's Web site at (<https://aefcenter.acc.af.mil/eafonline>) can be visited.

#### **Expeditionary Aerospace Force Experimentation**

The Air Force Experimentation Office (AFEO) ensures that all Air Force experimentation addresses EAF doctrine, logistics and materiel issues, and facilities modernization needed to achieve EAF force management and force presentation objectives. These experiments are conducted to foster operational change encompassing innovative approaches and new technologies that make the USAF light, lean, lethal, and rapidly deployable and employable worldwide. Operational changes must also facilitate seamless deployment planning and execution across the spectrum of military operations. In addition, experimentation is intended to supplement education and skills training by allowing airmen to test fresh ideas as well as help them learn and experience new ways to

accomplish the mission. To achieve this, the Air Force has undertaken the following experimental initiatives.

Joint Expeditionary Force Experiment 2002 (JEFX 02) is the fourth in a series of large-scale Air Force experiments that are designed to help the USAF prepare for the challenges of 21<sup>st</sup> Century Expeditionary Aerospace Force operations. The experiment attempts to model a future command and control system. This model is based on the Command and Control (C2) Critical Future Capabilities in Volume 3 of the Air Force Strategic Plan and the Aerospace Command and Control and Intelligence, Surveillance and Reconnaissance Center Campaign Plan.

JEFX 02 will be part of US Joint Forces Command's Millennium Challenge 2002 (MC 02), which will look at Rapid Decisive Operations in the 2007 timeframe. Of prime interest for MC 02 planners is the organization and tasks of the Joint Force Headquarters. MC 02 will incorporate elements of all military services, most functional and regional commands and many DoD organizations and agencies. The Secretary of Defense has directed that participants involve elements of the Air Force Expeditionary Aerospace Forces so that improved joint training and experimentation capabilities can be developed.

It should be noted that experimentation is fundamentally different than an exercise. Exercises involve training personnel in established processes on fielded systems. Experimentation is designed, and continuously repeated until the desired system and process knowledge is gained. Thus far, the outcomes of the JEFX series have yielded the following: knowledge about future EAF systems technology and processes, development of immature EAF technology and processes, and the rapid transition of proven technology and processes to the EAF/AEF warfighter.

### **AEF Commanders' Playbook**

The Commanders' Playbook is designed to provide the tasked, home-station commander, with some tools for AEF planning and preparation as well as links to complete regulatory guidance. The commander may use the playbook on line or download and print specific information they may need to reference when not near a computer. For those with personal digital assistants, they are able to download the checklist portion of the document. The playbook comes in two parts. The first part is comparable to an aircraft's dash-one manual while the second part is a quick reference checklist with a point of contact listing and AEF Key Rules.

Additionally as commanders, the primary role of developing UTCs cannot be underestimated. Commanders must work closely with all functional managers to ensure that the UTCs make sense and meet the requirements. Once the UTCs are established, commanders ensure that assigned personnel understand and know their UTC and AEF pair. This is a major construct of the AEF, which provides predictability and stability for deploying personnel.

Knowing their AEF alignment provides personnel with a working timetable to complete required deployment training. Commanders make certain personnel are ready for deployment as a squadron or as a UTC within an AEF. If the right mix or number of personnel is not available, commanders identify the shortfall as early as possible. Other units may be capable of supporting the requirement if they are given sufficient time to react to the request. In summary, the management of UTCs will be every commander's report card.



### **EAF Online**

EAF Online is a “One Stop Shop” providing instant access to general and functional specific deployment preparation information targeted at units, UTCs and individuals. EAF Online may be accessed at <https://aefcenter.acc.af.mil/eafoonline>, or through the AEF Center web page. After entering specific information (AEF, career field, and deployed location), users are provided an extensive collection of web sites and functional area specific information.

EAF Online also incorporates training templates providing the user with position specific information vital to quickly fit into operations at the deployed location, including Duty Title, Duty Description, Equipment Operated/Maintained, Required/Desired Training, and a Remarks Section. The templates also aid a commander in matching the right person to the position. All Expeditionary Combat Support personnel deploying to a steady state contingency are required to review their training template to ensure their readiness. “If deploying airmen get the training they need, they will reduce the time to get ready in the AOR and the turmoil that can be generated during AEF transitions,” AEF officials said (AFL, 2002).

### **AEF Certification**

AEF Certification is a unit commander driven, UTC based process that applies to all UTCs in the AEF Library that are tasked to deploy. It equally applies to those UTCs that are placed on a Prepare to Deploy Order. It assumes that the readiness of the pieces (UTCs) equates to the readiness of the whole. The process begins with the unit commander assessing the ability of their UTCs to deploy and employ, and it culminates when the Commander, Air Combat Command, as the designated Air Force spokesperson, sends a certification message to the Commander in Chief, U.S. Joint Forces Command.

Each step in the process depends entirely on the chain of command and an accurate assessment by commanders in the chain.

AEF Certification has two objectives: One, it holds commanders at each level accountable for organizing, training and equipping UTCs to provide required mission capability. And two, it facilitates the process of informing CINCs on the status of deploying forces. The following section discusses the tools available to the commander when supporting the certification process.

#### **UTC Status Reporting in the AEF Construct**

The goal of AEF UTC Status reporting is three-fold: provide HQ Air Force and MAJCOM staffs readiness information to employ and manage EAF operations; provide units a means to report their ability/inability to support the AEF taskings and identify specific deficiencies; and provide information to make resource allocation and tasking decisions. Air Force planners use this information to answer key questions: Are AEF tasked units ready to undertake their AEF mission? Do AEF tasked units remain ready for their wartime mission – to what level? Are AEF deployment cycles adequate for reconstitution?

Initially, the Status of Resources and Training System (SORTS) was used to gather this data. It readily became apparent that the unformatted data input was extremely difficult and time-consuming to extract and analyze, and it did not address the numerous Expeditionary Combat Support units that did not report SORTS. To overcome these shortfalls, the AEF Center developed the AEFC UTC Reporting Tool (ART). The ART is a web site to report readiness with the following characteristics:

- Go/No Go status assessed in Stoplight format (Green, Yellow, Red)
- Allows immediate access to and update of AEF UTC data

- Provides one central location for AEF readiness data
- Provides data for identifying and analyzing trends to facilitate decision-making.

ART can be accessed at the following addresses:

SIPRNET: <http://aefcenter.acc.smil.mil/> and selecting AEF UTC Reporting Tool.

Also, a training site can be accessed at: NIPRNET: <https://aefcenter.acc.af.mil/> and selecting the “Readiness” button. Note, the NIPRNET site is for familiarization and training, and the status of UTCs and remarks contained in its report section are notional.

Do not enter real world data on the NIPRNET site.

Effective management of Air Force resources requires precise information at all levels; therefore, reporting an accurate status is paramount. The ART is not a report card, but rather, it is a means of identifying a UTC’s ability to perform its Mission Capability Statement and identify shortages of resources.

#### **Deliberate and Crisis Action Planning and Execution Segment (DCAPES)**

The Deliberate and Crisis Action Planning and Execution Segment, known, as DCAPES is a computer software program that handles the movement of Air Force personnel anywhere in the world to meet planned, rotational and contingency deployments. DCAPES users are planners and commanders responsible for defining Air Force requirements during wartime and peacetime, as well as during exercises. “With DCAPES, we’re providing a significant enhancement for them, we’re getting better data to the warfighter, not just to the Air Force but to joint commanders, too” (AFL, 2002).

The main reason for this is that DCAPES writes directly to the Joint Operation Planning and Execution System (JOPES). Planners no longer have to produce deployment information separately and then make an input to JOPES. JOPES provides the foundation for conventional command and control by joint commanders and their

staffs. It is used to monitor, plan and execute mobilization, deployment, employment and sustainment activities associated with joint operations. “As DCAPEs fills in the requirements documentation, it goes directly to JOPES, so that we avoid conflicts and speed up the process” (AFL, 2002).

When the Department of Defense identifies a deployment need, JOPES only produces high-level operational requirements, leaving the services to fill in the details. DCAPEs allows planners to do this, down to actually identifying individuals by name and social security number. This ensures complete accountability. “Even at the Air Staff level, we’ll know where a person is without having to check with the unit and have them track the information down and report back to us” (AFL, 2002).

### **Lessons Learned**

The lessons learned program requires departing units to document their lessons learned so that inbound units can become better trained and prepared. The unit or individual can go to the AEF Center Lessons learned web site through the AEF Center web site:

NIPRNET: <https://aefcenter.acc.af.mil> (select ‘Lessons Learned’)

SIPRNET: <https://aefcenter.acc.smil.mil> (select ‘Lessons Learned’)

Searching the lessons learned database during the planning period could help a unit to identify problems other units have faced during their deployments. Included in the lessons learned will be recommendations and procedures that can be used to avoid or work around problems encountered by previous units. Additionally, it is recommended that personnel contact other units and the AOR for information.

After Action Reports are required (AFI 10-400) to be submitted to the AEF Center no later than 45 days after getting home. However, units are encouraged to

submit lessons learned before, during and after their deployment. This provides a quicker turn-around for follow-on AEFs, and it will help build the after action report for responsible personnel.

### **Air Expeditionary Force Battlelab**

Closely related to lessons learned is the AEF Battlelab. The AEF Battlelab is a unique organization focused on rapidly introducing high payback initiatives that reduce deployment support structure, reduce mobility response time, and increase deployed combat capability and effectiveness. The AEF Battlelab's mission is to identify and rapidly prove the worth of ideas for the CINC's employment of Air Expeditionary Forces throughout the entire spectrum of warfare. Ideas come from you, your airmen, guard and reserve forces, industry, academia, and civilians. Ideas can be submitted to the AEF Battlelab via this web site: [www.mountainhome.af.mil/AEFB](http://www.mountainhome.af.mil/AEFB).

### **Personnel Readiness Responsibilities**

The unit commander ensures unit personnel prepare for deployment in accordance with AFI 10-403, AFMAN 10-401, and AFI 36-507. Unit commanders and deployment managers ensure personnel assigned to UTCs meet all training requirements and maintain all required personal deployment items. Forward Operating Location PERSCO's determine AOR requirements and Base Personnel Readiness Units ensure all required AOR out-processing actions are complete prior to deployment. Individuals are cautioned to refer to applicable AFI's, MAJCOM guidance, and AOR Out-processing checklists to ensure requirements are met. Personnel requiring access to NATO classified information need to obtain clearance from homestation security managers prior to deploying IAW AFI 31-406.

### **Airman's Manual (AFM 10-100)**

The Airman's Manual is a comprehensive field book containing practical information and color photographs describing tasks for operations in austere locations – including how to pitch a tent and read a grid map as well as first aid and decontamination procedures. “Personnel need common skills and the know-how to conduct tasks related to deployed operations,” said Major Eric Schnaible, spokesman for the Air Staff's EAF Implementation Directorate. “This manual lays out the basics so all members can meet the mission in austere locales as well as we would be able to at fixed bases” (AFN, 1999).

The Airman's Manual is an initiative that the Air Combat Command Integrated Base Support Team prepared to educate the Total Force on some fundamental skills within a deployed environment. “Whether you're an administrative specialist, maintenance officer or supply craftsman, you could very well be expected to know how to use this information. Under the EAF, some Air Force members who have never deployed could deploy as an aerospace expeditionary force member and would need to know some of these basic skills for mission success” (AFN, 1999).

### **Personal Trainer**

The Personal Trainer concept is a trainee-centered approach to delivering and managing Air Force training. The concept consists of traditional OJT and classroom instruction followed up with a web/computer based learning environment. The Personal Trainer allows a user at any management level (trainee, trainer, supervisor, commander, training manager, certifier, MAJCOM or Air Staff) to define, document, and manage Air Force personnel training and education information

The Personal Trainer concept gives trainees the ability to monitor their own personal training plan, enroll in courses, and request OJT. The trainee can access

computer and web based training anywhere, at their convenience, and electronically score completed work. Supervisors can monitor training progression, schedule and conduct OJT, and document training records. By enrolling trainees on-line, supervisors can capitalize on each and every training opportunity. Commanders can match personnel with mission requirements and predict performance gaps thereby preventing training shortfalls. The commander also has greater control of unit, base and command requirements through increased visibility of training metrics and reports.

### **Warrior Week**

Air Education and Training Command (AETC) has changed its basic military training operations in order to keep pace with the expeditionary aerospace force concept. To support expeditionary operations, AETC initiated Warrior Week, a major change to Basic Military Training designed to educate new airmen on deployment skills and instill in them the aerospace warrior mindset.

Begun in October 1999, Warrior Week takes place during the fifth week of enlisted basic training at Lackland AFB, Texas. The week sets the expectation of an expeditionary environment in the new airmen by teaching them how to successfully operate in field conditions. Warrior Week training includes going through mobility processing, M-16 weapons orientation, learning how to set up defensive fighting positions and establishing field security and communications, and recognizing unexploded ordnance. It also teaches self-aid and buddy care, defensive reactions to nuclear, biological and chemical warfare, and the Laws of Armed Conflict and the Code of Conduct.

“The global climate is constantly changing and so is the Air Force,” said Major General Andrew Pelak, 2nd Air Force Commander, who oversees all basic and technical

training for AETC. “As the Air Force changes its operations to be more responsive to future demands on our nation’s aerospace capabilities, our beginning enlisted training also now reflects that new direction,” Pelak added. “Basic military training has always focused on core values, teamwork and discipline, but now it also lays the foundation for airmen to succeed in an AEF (AFN, 2000).

### **Phoenix Readiness**

Phoenix Readiness is Air Mobility Command’s primary contingency preparation program. It consists of four phases that include education, testing, exercise and evaluation. The Air Mobility Warfare Center’s 421<sup>st</sup> Ground Combat Readiness Squadron oversees the first two phases of the program – education and testing -- through a combination of classroom instruction and a four-day field training exercise.

During the classroom phase of the course, the 200 to 300 students who form the 421<sup>st</sup> Aerospace Expeditionary Group receive training geared toward deployment operations within their specialty. Current course tracks include security forces, services, aerial port, tanker-airlift control elements, explosive ordnance disposal, combat camera, exercise evaluation team members and deployed support commanders. In addition to the specialized training, all students receive weapons familiarization and instruction on field craft, urban tactics and convoy operations.

The training is put to the test during the second phase of the program, when students apply the classroom instruction to a contingency environment. The ability of the unit to integrate, survive and conduct operations while facing weapons of mass destruction, host nation civil unrest, air base defense and humanitarian relief scenarios is the primary focus of the training and field exercise. When the training at the Warfare Center ends, the final two phases of Phoenix Readiness, exercise and evaluation, begin.



Through base exercises, wing exercise evaluation team evaluators will reinforce the training that troops receive during the course.

The following deployment challenge for the 133<sup>rd</sup> Airlift Control Flight (ALCF), ANG, Minneapolis International Airport, MN, is an excellent example of the success of the Phoenix Readiness program. “We have never done an operation to this extent,” said the Chief Master Sergeant, command and control superintendent, 133<sup>rd</sup> ALCF. The deployed location is under the highest level of alert, Force Protection Condition Delta, which indicates in the immediate area a terrorist attack has occurred or intelligence has been received that terrorist action is likely. “We will be staying in tents on an airfield – it is like going to the Wild West” (Gillette, 2002:10).

To prepare for this type of mission, members must gain and maintain extensive training and experience. Just to get into the unit, members must be on their second enlistment and have at least a five skill-level in their current career field. Most members are cross trained from two or three other jobs, and many of the personnel who cross train into airlift control come from career fields that involve work in and around aircraft. “It really helps that we have people with aerial port experience, so we can unload and load planes ourselves” (Gillette, 2002:10).

Once admitted to the unit, members begin a lengthy formal training program that takes approximately two to three years. New members attend technical school followed by Phoenix Readiness and four other mandatory one to two week schools held at the Air Mobility Warfare Center, Fort Dix, New Jersey. Along with the formal training, unit members learn skills associated with almost every job involving airlift operations, cargo movement, and flight line operations -- “we all learn each other’s jobs” (Gillette, 2002:10).

### **Unique Maintenance Training Tasks**

Aircraft maintainers have a few exclusive training requirements that must be considered. Review the squadron special certification roster and validate the priority tasks such as: Red X, Engine Run Supervisors, Tow Team Members, HAZMAT, In Process Inspection, Exceptional Release, and Load Crews. Also, ensure that personnel are familiar with the AOR Operating Instructions, local maintenance procedures and MAJCOM directives. In addition, designate your flightline and special purpose vehicle drivers for local area orientation and certification.

### **Train to Task Requirements**

The Air Force Component Command (AFCC) identifies train to task requirements for the supported CINC. They are a listing of training required to properly function in the deployed position (i.e. weather forecasters may need specialized equipment training prior to deploying to support an AEF billet). The AFCC specify theater specific requirements in a TPFDD. The TPFDD is used to generate a Deployment Requirements Manning Document (DRMD). The AEFC will release the DRMD no later than 120 days prior to the on-call period. The DRMD contains specific Unit Line Numbers (ULNs) and Line Number Remarks (LNRs).

Train to task requirements in EAF Online can be input into the database by deployed personnel in-theater (for example, some of the deployed weather personnel have provided AEF Center Weather representatives with the data needed for the training templates that house the train to task requirements) or Air Force component representatives could input them. The AEFC uses the DRMD to compare requirements with EAF Online data, validating the requirement and forwarding it to the designated approval authority. Train to task requirements for each duty position are identified by the

associated ULN/LNR. Unit personnel should use EAF Online to locate individual train to task requirements.

### **Ancillary Training Requirements**

Ancillary training requirements are defined as training required for deployment regardless of AFSC or deployed location. Deploying personnel will have additional training requirements based on their AFSC and assigned UTC within the deployed theater of operations. Air Force ancillary training requirements include Combat Arms Training/Maintenance (i.e. M9/M16/M60), Chemical Warfare Defense (CWD), Law of Armed Conflict (LOAC), Self Aid and Buddy Care (SABC) training, and Anti-Terrorism (AT) training. Unit commanders are responsible for ensuring personnel are fully trained to support the tasked UTC.

### **Small Arms Training**

Individuals needing small arms training are defined as: “Identified to Deploy” and “Subject to Deploy.” Personnel review AFI 10-403, Deployment Planning, section 1.6.2, to determine the appropriate training category. Identified personnel must be fully trained and equipped before their AEF period of deployment eligibility (e.g. 3-month AEF window). Subject to deploy personnel must be fully trained and equipped on a time available basis and as resources permit.

The minimum small arms training requirements are found in AFIs 31-207, Arming and Use of Force by Air Force Personnel, and AFI 36-2226, The United States Combat Arms Training and Maintenance Program. In addition to adhering to the applicable instructions governing small arms training, commanders are required to review the area of responsible reporting instructions for specific CINC and Air Component requirements. AOR reporting instructions are found at (<https://aefcenter.acc.af.mil>).

### **Chapter Three: Research Methodology**

Although the Air Reserve Component, in its entirety, is critically important to the EAF construct, this research project only identifies problems unique to training and employing the Air Force Reserve. In so doing, this document analyzes and presents the challenges facing the Air Force Reserve as it attempts to fulfill and meet its expected role under the EAF concept. It proposes solutions that will be useful to Air Force Reserve leadership and its force planning staffs in determining how best to educate and train the reservist. And finally, a tertiary purpose of this project is to present an evaluation of the research performed, and where pertinent, to call attention to those findings which provide advances in the current state of Air Force Reserve education and training.

*“To commit the youth of our nation to lay their lives on the line, we must at least take the viewpoint to equip them with the best weapons that time and technology can provide, and provide them with military leaders who are trained and encouraged to pursue the most innovative approaches to operations and tactics. With these elements in place, the remaining task is to train, train, train, under the most realistic conditions that can be imposed for the military operations that appear most likely”*  
(Beery, 1999).

*--General Curtis LeMay*

This document is an assessment based on the researchers own data analysis because, to date, the Air Force and AFRC have not systematically monitored Expeditionary Aerospace Force training results. Furthermore, the lack of specific

measurable goals in some education and training areas could hamper future assessment efforts. To conduct a meaningful evaluation of the subject matter, qualitative research was conducted to gain information on AFRC expeditionary operations to date. Documentation of presentations, speeches and briefings were carefully scrutinized. Functional managers, planners, and past EAF/AEF commanders were interviewed. MAJCOM and AFRC education and training experts were also consulted. Since true EAF/AEF operations remain in their infancy, numerous other publications, journals and reports were investigated. These include force employment journals, MAJCOM reports, RAND studies, and Defense Technical Information Center documents.

## **Chapter Four: EAF Training Results & Findings**

### **Air Force Reserve's Support Role Under the EAF Concept**

Initially, during the implementation of the Expeditionary Aerospace Force Concept the Air Force came to the air reserve components to fill AEFs 1 through 4. To support these taskings, the Air Force Reserve developed a unit-sourcing template that assisted in matching expeditionary combat support personnel and equipment with AEF requirements. Ultimately, the 439<sup>th</sup> Airlift Wing, Westover Air Reserve Base, MA, and the 433<sup>rd</sup> Airlift Wing, Kelly AFB, TX were identified for AEFs 1 and 2. The 911<sup>th</sup> Airlift Wing, Pittsburgh International Airport Air Reserve Station, PA, and the 507<sup>th</sup> Air Refueling Wing, Tinker, AFB, OK, covered AEFs 3 and 4. Since then, AFRC units continue to be tasked in each and every AEF.

Each Cycle, reserve participation peaks during AEF 8, when 20 aircraft, and dozens of aircrews and supporting aircraft maintainers are deployed. Serving as the Reserve's lead fighter wing, the 419<sup>th</sup> Fighter Wing, Hill AFB, UT, deployed eight F-16s to Incirlik Air Base, Turkey, for Operation Northern Watch. Also supporting Northern Watch on a rotational basis are KC-135Es and aircrews from the 927<sup>th</sup> Air Refueling Wing, Selfridge ANG Base, MI, and 904<sup>th</sup> Air Refueling Wing, Beale AFB, CA; and KC-135Rs and aircrews from the 434<sup>th</sup> Air Refueling Wing, Grissom Air Reserve Base, IN. An E-3 crew from the 513 Air Control Group, Tinker AFB also supported Northern Watch for part of the 90-day period. Additionally, six C-130 airlift aircraft and crews took part in Operation Joint Forge military operations in part of the former Republic of Yugoslavia, during part of AEF 8 (AFN, 2002).

KC-10 aircrews from the 514<sup>th</sup> Air Mobility Wing, McGuire AFB, NJ, provided air refueling for AEFs 1, 5 and 9, and the Reserve's 349<sup>th</sup> Air Mobility Wing, Travis AFB, CA, performed the same job for Operation Southern Watch for AEFs 3 and 7. Four KC-135Rs, crews and support people from the 507<sup>th</sup> Air Refueling Wing, Tinker AFB; 916<sup>th</sup> Air Refueling Wing, Seymour Johnson AFB, NC; and 931<sup>st</sup> Air Refueling Group, McConnell AFB, KS, supported Operation Deliberate Forge during AEF 3.

Three HH-60G helicopters, aircrews and aircraft maintainers from the 301<sup>st</sup> Rescue Squadron, Patrick AFB, FL; 304<sup>th</sup> Rescue Squadron, Portland International Airport, OR.; and the 305<sup>th</sup> Rescue Squadron, Davis Monthan AFB, AZ, deployed to Incirlik Air Base in support of AEF 6. During AEF 10, and HC-130 aircraft, crew and crew chiefs from the 39<sup>th</sup> Rescue Squadron, Patrick AFB, and the 303<sup>rd</sup> Rescue Squadron, Portland, OR, deployed to Keflavik in support of the Defense of Iceland. All five squadrons are part of the 939<sup>th</sup> Rescue Wing at Portland.

Two B-52Hs with two crews from the 917<sup>th</sup> Wing, Barksdale AFB, LA, pulled alert duty at home station during AEF 7. And finally, as part of AEF 1, 3, 5, 7 and 9, three to six Reserve C-130 airlift aircraft and four to eight crews along with aircraft maintainers continue to deploy year around to Muniz ANG Base, Puerto Rico, in support of U.S. Southern Command's Operation Coronet Oak.

In terms of personnel deployed, the following statistics illustrate the level of Air Force Reserve involvement to date. Throughout Cycle One, 4,290 Air Force Reserve personnel participated, and deployed. This contribution was approximately four percent (4%) of the Total Force employed during the complete Cycle. During Cycle Two, 4,304 Air Force Reserve personnel participated and deployed. This contribution was approximately six percent (6%) of the Total Force employed during the Cycle. And

finally, throughout Cycle Three, so far 7,589 Air Force Reserve personnel have participated and deployed (O'Connell, 2002).

The Air Force Reserve has moved into an unprecedented partnership with the active force, but it has not been without its costs. Reserve members now share the stress of operations tempo with their active duty counterparts and must cope with the problems of frequent deployments and prolonged separations from their families. In addition, they face the unique challenge of meshing their military duties with their civilian careers.

Right now the average aircrew is putting in about 110-120 days per year, and personnel in support functions are averaging about 70 days per year. This is a lot of time for what still is a reserve program (O'Connell, 2002). AFRC is beginning to see little problems in the area of working people too hard and asking too much. This is all accomplished with volunteers, so the new challenge is to work in concert with employers and families. General Richard Myers, Chairman of the Joint Chiefs told PBS "Newshour" host Jim Lehrer on April 20, 2002, "The war on terrorism is going to be a marathon, not a sprint." The Joint Chiefs, he added, are "very concerned about operational tempo and the impact it has on families and for the reserve component" (Maze, 2002).

On a similar note, Senator Max Cleland, D-Ga., Chairman of the Senate Armed Services military personnel panel is calling for a multi-year plan to significantly increase the number of people in uniform. "We cannot fight the war on terrorism and meet all our other commitments with the current number of people in the military," he said. "We have to cut commitments or increase personnel, and I do not see how we are going to cut commitments. Otherwise you will have no reserves to commit when something else happens" (Maze, 2002).



Military officials have gone on record saying their personnel are overstressed by current operations. For now they are looking at other means to relieve the pressure than simply increasing the number of personnel. “The fact that the services have used stop-loss programs to keep some people on active duty even though their obligations are up and that we have mobilized 82,000 reservists and National guardsmen since September 11<sup>th</sup> is further proof of the need,” he said. “Reserve mobilizations and stop-loss are not long-term answers to what we can increasingly see is going to be a long-term war on terrorism,” Cleland said. Extended active duty for large numbers of reserve forces is a “huge concern to the Air Force,” emphasized Cleland (Maze, 2002).

### **Pilot Training Concerns**

The Air Force has too few pilots chasing too many contingency deployments. That hurts retention, which leads to even fewer pilots staying in service to help carry the operation tempo. It is a downward spiral that feeds on itself (Correll, 1999). Pilots with between six and eight years of service are of special concern. The unfortunate prospect is that many of the pilots from the sixth through the eighth year groups will get out and be lost to the Air Force. The Air Reserve Components are not in a position to pick them up. ARC units are fully manned with pilots and already have many qualified applicants for every cockpit that becomes available.

New pilots take about two years to reach the “experienced” level. During that time, experienced pilots must fly with them on training sorties. Inexperienced wingmen in F-16s, for example, need to fly 134 sorties a year, whereas experienced F-16 pilots need only 112 sorties a year to maintain readiness (Correll, 1999).

When the experience ratio gets low, the experienced pilots must fly more training sorties than they need themselves in order to accompany the younger pilots. In effect, the

extra sorties by the veteran pilots are wasted. Among other consequences, the squadron cannot fly its training program within the regular allocation of flying hours. The Air Force has increased production from Undergraduate Pilot Training. However, it will take a long time to replenish the ranks that way. And, as the new pilots join their units, the experience ratio will fall further still (Correll, 1999).

### **Effects of 911**

Quote from Major General John R. Baker, Assistant Deputy Chief of Staff for Air and Space Operations, "Airpower for the Long Haul," March 2002:

Not only is USAF "burning up" fighters and engines, claimed Baker, but fighter pilot proficiency is beginning to sag.

"We train very carefully against a set standard," Baker explained. "Certain events have to be accomplished every 30 days and every six months. If all you are doing is flying CAP missions, and all the AWACS guys are doing is supporting them, and you are doing tanker rendezvous, there are a lot of required continuation training tasks that are not being accomplished."

For example, said Baker, a fighter pilot on a CAP mission gets to practice the tasks of managing his fuel and doing tanking procedures but not much else. He certainly does not use those hours honing combat skills. "For the guys in the States that are doing Noble Eagle," said Baker, "their combat skills are atrophying." For AWACS operators supporting the operation, they "aren't running combat intercepts."

Air Force officials have sought relief from CAP missions over the US, wanting to reduce their scope, duration, or coverage, but a Pentagon spokeswoman said in mid-January that the flights "have been and will continue to be a very important part of protecting the American people." Noble Eagle aircraft had, by January, responded to more than 200 incidents involving unidentified aircraft or aircraft on which there were disturbances.

A senior Air Force official said he worries that when the Noble Eagle pilots come up for their turn in an overseas deployment, their skills "won't be up to our normal standards."

Personnel is another looming problem identified by the Long-Haul Task Force. Air Force Secretary James G. Roche said in January that USAF is probably undermanned to the tune of 10,000 people, a figure he considers a minimum estimate.

The high pace of operations is fast outstripping the capability of USAF's Aerospace Expeditionary Forces to provide sufficient people to do the mission, since they were designed for peacetime coverage that would claim only two AEFs at once.

### **Complicated Problem**

However, said Baker, acquiring another 10,000 personnel within a short period of time is not as simple as it might sound. The LHTF is trying to "figure out if we could absorb them," he said, noting, "This is pretty complicated."

Bringing in substantially more recruits would require more facilities to house them, more instructors to train them, and more equipment to train on. Instructors, for example, are already in short supply. Baker noted that such a move has implications for bonuses, housing, retention, and many other issues.

The LHTF is watching to see what effect the ongoing operations will have on retention throughout the force-active, Guard, and Reserve. He noted that, even as reservists come and go, since Sept. 11, "probably 20 to 25 percent, in any given period that we've looked at, have been volunteers." The rest have been involuntary call-ups. In December, the Air Force was still capped at 40,000 activated reservists, and about 10,000 of those were volunteers. When one volunteer leaves, said Baker, another appears to take his place.

Baker is anxious to see more data because Stop-Loss-the policy by which personnel in needed specialties are prevented from separating from the service-"can only go on for so long," he said. When it does stop, he said, he expects it will be done in a phased way. "In other words, we won't just cut it off for everybody." Watching how many choose to stay when they can leave will provide insight as to how to work the increase in end strength, Baker said.

A large number of pilots volunteered to return to active duty, said Baker-not so many that it "overwhelmed the system" but a very "encouraging" number.

The training issue is perhaps most acute for careers known to be at below minimums before the conflict began. These are the so-called low-density, high-demand systems such as AWACS, Joint STARS, Rivet Joint, and combat search-and-rescue forces. Baker warned that the pace could not be sustained without having a severe impact on future training.

"We are going to eat their seed corn" without a letup, Baker said. While the units are getting plenty of real-world operating time, in many cases, they do not operate as vigorously as they would in a training

situation, and they, too, are missing important proficiency upgrades.

He noted that, after the 78-day Balkans operation in 1999, it took the Air Force 18 months to recover because of the missed training, absence of instructors for new recruits, and missed rest and recuperation for the troops.

"Entry-level and continuation training is suffering," Baker noted. "The time to allow low-density, high-demand [assets] to recover and get new entry-level people trained could exceed that following Allied Force."

There will be money in the Fiscal 2003 budget for additional systems in short supply, but again, the spigot cannot be turned full on because of structural limitations.

The worst personnel situation, Baker noted, was in the area of security forces. In previous conflicts of the last decade or so, security forces would deploy forward, since the home base was considered secure. Now, the home base also needs protection, and there simply aren't enough troops to go around.

Reducing the threat condition at many domestic bases from "Charlie" to "Bravo" helped alleviate the problem somewhat, but that does not provide anything close to a final solution, Baker noted. Many facilities, like the Pentagon, are still at Charlie, the highest level of alert. "Delta" means there is an active assault (Tirpak, 2002).

In addition, AFRC personnel are suffering from a serious case of "mission creep" as local commanders - eager to show what their units can perform - have volunteered their personnel and units for an expanding number of missions worldwide such as support for assorted Air Expeditionary Force packages that Air Force planners need staffed (Connors, 2002).

What has becoming increasingly apparent is that some reserve component commanders are speaking for their units without giving due consideration to the financial, familial and civilian job concerns of their part-time military members. Many reservists and Guardsmen have started to question the true motives behind the activations, as well as their military necessity. The prolonged deployments have hurt morale, increased financial hardships and led to breakdowns in unit cohesion as the call-ups continue, in many cases without real rhyme or reason.

In one reserve airlift wing, almost 100 percent of its Aircraft Generation Squadron (AGS) members had been activated on a piecemeal basis in May 2002. In fact, it was learned from some unit members that the squadron commander had volunteered more people for activation than the active-duty support role even requires (Connors, 2002).

The number of reservists deployed overseas has become so numerous that over-manning has become a real problem. In one overseas site, there is actually not enough work to go around and personnel are splitting 12-hour shifts with two people working six hours apiece. Each member of the squadron works four days on with three off. Members of this unit, rotating back to their stateside base after 90-120 days overseas, have told other unit members that they intend to leave the Air Force Reserve as soon as they can because they

are fed up with the constant deployments and the deception from their own leaders (Connors, 2002). By one senior NCO's estimation, this AGS squadron will fall to 50 percent manning by the end of this deployment period because of the anticipated exodus of angry and disillusioned personnel.

Reservists and Guardsmen - like their active-duty comrades - are all volunteers. They should not - and will not - tolerate bad planning, poor leadership and open-ended and constant deployments where the mission is vague and the need for their presence is questionable.

If AFRC leaders continue to ignore the legitimate concerns of their subordinates, they may find themselves unable to support the next international conflict or national defense mission for which they are summoned.

### **AFRC Training Adequacy**

Research generally paints a positive picture of a typical Air Force Reservist's ability to perform their specialty within the EAF/AEF construct. Based on the Reserve's performance in AEF rotations thus far, one finds that the Air Force Reserve is adequately trained to fulfill AEF rotation requirements. Specific examples of this will be covered later in this chapter. Although AFRC employs citizen airmen, their training requirements are no different than those of their active duty or ANG counterparts. Because a reservist stays with the same unit for a longer period of time than an active duty member would, one will find that the reservist is able to become very familiar with the weapon systems they fly and maintain. This in turn develops into tremendous mission effectiveness, regardless if it is in support of an AEF or any other deployment or contingency.

### **AFRC Overcomes Bumps in the Road to Achieve AEF Success**

The following quote from Major General James E. Sherrard III, USAF, Chief of Air Force Reserve, in April 2000 indicates that initial AFRC AEF activities were fulfilled adequately.

“Spring is in full swing in most parts of the country. Flowers are in bloom, everything is green again, and, as regular as the change of seasons, Air Force reservists are deeply involved in air expeditionary force activities around the world. AEFs 5 and 6 are well under way.

Approximately 940 men and women from Reserve units around the country have been active participants in this latest installment in the mission of the total Air Force. Like any complex new program, AEF needed a growth period to sort itself out. We knew this going in. We've all heard stories — some true, some not — about how the roles of some reservists were not quite what we had in mind when we signed up to our part of the expeditionary aerospace force. We've licked much of that.

There is a growing understanding among commanders and in-theater supervisors not only of what Air Force Reserve Command offers, but also that reservists are professionals who are experts at being very productive within specific blocks of time. Through your contributions, you are clearly

showing to all the experience and dedication to service AFRC people bring to the fight. Mutual understanding is a must. We need to be prepared to revisit it occasionally not only with those with whom we will work, but with our civilian employers and families as well. The concept surrounding AEF focuses on introducing a measure of order into our very busy lives. Our most important job after the mission is to ensure the growth and education process continues.

Air Force reservists are among the best in the business of keeping our nation free and secure. I firmly believe that the air expeditionary force is one of the most effective tools we have for doing this. I could not be more proud of our accomplishments as part and partner in the total Air Force, and senior leaders throughout the Air Force agree. Most of the bumps in the road are behind us. Work hard, be proud. Your efforts truly allow our Air Force Reserve to perform Above and Beyond!" (Sherrard, 2000).

In addition, the AFRC AEF Cell has encountered many challenges since its inception. One of the biggest problems has involved receiving valid requirements from the Air Force in a timely manner. You will recall that one of the advantages of the EAF was that it promised more predictability than the deployment schedules of the past. For reservists, this means they will know well in advance what is expected of them. Early, on this has not always been the case. Another problem has been the lack of lead-time for planning. "We are essentially late to the need," said Anthony Tassone Jr., AEF Cell Director. "We are trying to make policy, solve problems and do deployments all at the same time" (McCoy, 2001). Transporting reservists to and from operational deployments every 15 days is another problem the cell is trying to solve, but there is a plan in the works, involving commercial carriers, to resolve that issue.

### **AFRC Training Effectiveness**

Research indicates that training in the Air Force Reserve today, is highly effective. However, AFRC admits that it must do a better job in formal school forecasting and execution (Lee, 2002). With an increasing reliance on non-prior service



recruiting, formal school training requirements similarly increase. For years, the Air Force Reserve has under-executed formal school attendance. Much of this attributed to the citizen airman concept where not all reservists can take time out of their day-to-day schedules to attend formal training – but it does eventually get done at some point in time. Some members may have to cancel at the last minute due to an unforeseen obligation at their place of employment or at home, and the Air Force Reserve, consequently, loses the school slot. To make matters worse, AFRC exhausted all of its 3-level school quotas in 50 AFSCs by the end of February 2002 (Lee, 2002).

“The AEF is a success,” said Colonel David Nichols, 332<sup>nd</sup> Air Expeditionary Group commander, “People and organizations know when they are going to be tasked to deploy, so they have the opportunity to prepare. The Reserve forces do it even better because they take that as their only mission. For a year prior to the deployment they spend their Reserve weekends in a concentrated training effort spinning up for the AEF process (Cook, 2001). While reservists rotate in and out of theater more frequently, their experience levels are at least as high as their active duty counterparts. “I have crew chiefs out here who have been crew chiefs for nearly 20 years,” said Colonel Nichols. “They are good at what they do. I think it’s well worth rotating the experience in and letting them serve their country” (Cook, 2001).

### **Current Events**

The Air Force logistics community took on a new look 1 April 2002 as three directorates streamlined down to two, and three officer career fields merge into one. “It will show our customers that Air Staff and the Air Force are serious about integrating logistics training and processes,” said LTG Michael E. Zettler, Air Force deputy chief of

staff for installations and logistics. “We are seeking every possible opportunity to make transformational-type changes. It will positively increase our ability to build expeditionary people and processes for the Air Force. I think current events have made this a more compelling need in the Air Force than in the past. We do not have the luxury of time anymore. We need to be trained and integrated from the start instead of doing it in a coordination phase after a lot of activity has occurred,” Zettler, added (Banda, 2002).

On another front, the Air Force’s Web-based deployment tool, EAF Online, has been redesigned to give airmen more help with EAF issues. The updated site gives users more information, enhanced access, and the convenience of a single source for all AEF deployment information. The new format combines features of the previous AEFC site into a Web “portal” which provides access to various databases and can be customized for each user. The newest feature, the Commanders’ Toolkit allows commanders to track the deployment status of their unit and people. Future enhancements will include a training module to track skill level training and a module to track operations tempo.

### **The ‘Vice Squad’**

The Vice Squad was stood up in February 2002 to assess how well the AEFs are resourced to handle current requirements. The primary goal is to assess what the long-term steady state of EAF affairs should be. Also among the Vice Squad’s tasks is a review of personnel eligible for rotation within an AEF. To date, officials have nearly doubled the number of people eligible for rotation from 120,000 to well over 200,000 (Butler, 2002). In accordance with Secretary of Defense directives, the Air Force is conducting a top-to-bottom review of career fields and core competencies.

The review will likely produce three categories of workers: those assigned to taskings that must be handled by active duty, Guard or Reserve personnel; missions not

deemed core, where contractors can provide services; and duties that could be handled by contracted personnel or civilians with some military oversight (Butler, 2002). To better oversee the progress of AEFs in the future, the Air force has formed a new office which will act as the mechanical interface for the Vice Squad. This office will be discussed in the next section.

### **New Pentagon Office**

The Office of Special Assistant for Expeditionary Aerospace Force Matters, headed by Major General Timothy Peppe, began operating in March 2002. The office has a one-year charter to gather all EAF issues and determine what has been done to rectify them. In order to make corrections, the Air Force may have to make some adjustments to the way the EAF does business. Because the current EAF construct is based on an increased operations tempo that was not predicted. Once the office has developed a data baseline, root causes for the issues will be investigated. Ultimately, clear EAF policy and guidance will be developed and published, Air Force officials said (Riley, 2002).

Leadership understands this dilemma and has started aligning Air Force Resources to make the on-going EAF transformation successful. Air Force officials know there are a lot of people working EAF issues throughout the system. This alignment process is part of the charter for the new EAF office. It will be a method for identifying who is working on what in little pockets and bringing them together. It is important to note that the EAF office does not replace any of the functions of the AEF Center at Langley AFB, Virginia.

## **Future Total Force**

The Future Total Force is a key transformational initiative for developing the 21<sup>st</sup> Century Air Force. Over the years, the United States Air Force has been the leader in using its component forces to create a more capable air and space power team. Future Total Force envisions new and creative ways to further the integration of the air components in a way that is different than its past but still connected to its traditions as it evolves in the 21<sup>st</sup> Century toward what the Air Force Reserves call the Future Total Force.

Expeditionary operations from Desert Storm to Enduring Freedom demonstrate that the Reserve Components are critical in providing the complete potential of American air and space power. Future Total Force, a pillar of the Air Force Vision, will help to explore new ways to optimize the Active, Guard and Reserve components to make the best use of our resources and people to meet the national security requirements of the 21<sup>st</sup> Century.

When people depart military service, the Air Force loses skilled, talented and experienced people. Also, they lose billions of dollars that was spent training them and they incur new additional costs to replace them. The underlying belief in the Future Total Force is that the Air Force needs to change the way it does business by providing an environment, which keeps personnel in the Total Force, reduces turnover, and maintains the skills and experience required in today's increasingly complex technical force. This will require changes in both personnel and management systems and in organizational constructs.

*“The Future Total Force concept, through its programs to promote new organizational and personnel policy, offers an opportunity to address the transformational challenge in furthering the integration of the Air Force components. I encourage you, the men and women of today’s Air Force—Active, Guard, Reserve and Civilian—to think creatively, to develop new efforts and new approaches. Together we can enhance the efficiency, the flexibility, and the capability of our 21<sup>st</sup> Century Air Force.”*

*--General John Jumper  
Chief of Staff*

### **Success Stories**

#### **Operations Northern & Southern Watch**

The following quote from General Richard Hawley, Commander, ACC, emphasizes the effectiveness of training and readiness in these AORs. “I think it’s absolutely amazing what a great job they’re doing for us. Think about the environment they’re in every day. We have asked them to operate in a lethal environment every day and to figure out how to make it no-risk. Because their first priority is not getting shot down. And yet, they must enforce a No Fly Zone when the initiative is in the hands of the enemy. It’s exactly what you don’t want in combat. And these young men and women are flying into that combat zone every day. They’re analyzing the situation perfectly, responding perfectly in order to drive that threat out of the zone—avoiding SAM traps that have been set up on the ground—and they’ve been doing a great job. And they’re doing it because they’ve been very well trained. And if there’s one resource we need to continue to protect, it’s that well-trained airman on the ground, in the air, everywhere in the Air Force” (Hawley, 1999).

## **Distance Learning**

Distance Learning already is, and will continue to be, a substantial part of the Air Force Reserves education and training programs. By continuing to follow the Distance Learning Roadmap, the Air Force has been able to capitalize on existing strengths and move into a position, even with increasing operations tempo, to continue to provide the best possible education and training. The resources spent thus far have been modest in comparison to the payback and small compared with other means of preparing our people to fight and win wars (Lord, 1999).

The Distance Learning Roadmap is a careful appraisal of the size, military potential, and cost of the education and training system AFRC will take into the 21<sup>st</sup> century. As AFRC forces are deployed overseas, and our global interests become more complex, we must embrace new Distance Learning education and training technologies and modify our instruction and our thinking to match the realities of this changing world. By leveraging technology in education and training, the Air Force Reserve has successfully addressed urgent issues with viable solutions that have resulted in enhanced readiness, and reduced costs ( Lord, 1999). While Information Age Distance Learning technologies have shut the door of some traditional classrooms, they have opened the door to the enormous power of the global classroom.

Finally, research indicates that the Expeditionary concept is likely to provide measurable benefits for some time to come. However, the Air Force Reserve has not sufficiently established quantifiable goals or a systematic approach for collecting data to measure the concept's results (GAO, 2001). Without these management tools, AFRC will not be able to systematically assess the extent to which the Expeditionary concept is

achieving its objectives or obtain the information it needs to make future adjustments to realize the concept's full potential.

For example, the Air Force Reserve has not quantified the objective of improving overseas deployment predictability for its service members. Neither has it systematically collected data to determine whether it is accomplishing this goal. Although Aerospace Expeditionary Force rotational cycles provide AFRC units known predictability, there are no deployment predictability goals for individual service members (GAO, 2001). Without quantifiable goals and systematic data collection and analysis, AFRC cannot readily monitor attributes critical to implementing the Expeditionary concept.

## **Chapter Five: Recommendations and Conclusions**

It has not been easy to get to this point. It has been a learning experience, but it is the first step in trying to create a stable and predictable lifestyle for all of our men and women. EAF is a journey, and we have many more steps to take along this path as we transform the Air Force from a forward-based, Cold War force to an expeditionary force able to respond to crises around the globe.

Pentagon reserves chief Duncan stressed that he is not opposed to a broader role for the reserves – within limits. “We need to open our minds to the possibility of greater reliance on reserve components. The reserve forces we have today...are substantially better and have substantially more experience – a function of the fact that they are all volunteers and they probably came into the reserve forces because they had significant active duty experience before. That is an asset we cannot afford to ignore. And the new security environment permits us to do that.” However, Duncan cautioned that “it makes no sense whatsoever to reduce certain active duty units and leave in the force structure Reserve units whose mission was to support the active units that are now gone” (Sweetman, 2001).

It is imperative that AFRC leaders and functional managers set goals to do a much better job of forecasting 3-level schools. The fully trained prior service resource pool has dried up (Lee, 2002). AFRC should also lean forward in acquiring additional alternative training systems such as Advanced Distributed Learning (ADL). ADL is a means to satisfy training and education without the dependency of an instructor on sight, and it could be accomplished at times other than the normal Unit Training Assembly, i.e. drill weekend (UTA). This would free up the individual during the UTA, and make them more available for warfighting skill training, and AFSC skill-award training. More work



needs to be accomplished in the conversion of conventional classroom training into CD-ROM, and computer-web based instruction. AFRC officials agree that devising a plausible means of compensating reserve members for applying training and education through these means could be an additional motivator.

The need for conversion of informal and ancillary courses to a Distance Learning format has also been identified. The Air Force Reserve need these types of courses to be delivered via tailored Distance Learning formats so that reservists can take the courses at a time and place of his or her own choosing. This would enable reserve personnel to take the course around another full-time job. The Air Force has plans to evaluate these types of courses for possible Distance Learning conversion after formal courses have been evaluated and certified.

Additionally, AFRC officials suggest that future Expeditionary Aerospace Force structures should be organized such that incremental mobilization of the reserves would provide combat forces--together with their corresponding support forces--thereby guaranteeing a "fightable" force, no matter what degree of mobilization is attained (Meilinger, 1998). One portion of the reserves would remain at the highest state of readiness. Another part would maintain a low capability in the assigned weapons system or support function. Personnel would attend ground schools and take part in re-orientation flights periodically, but in the event of a crisis, they would need a short but intensive refresher course to bring them up to an operational level of performance.

The remainder of the reserves would be inactive. After training and an initial tour in their specialty, personnel would return to civilian life, and the Air Force would not attempt to keep them current. In the event of mobilization, however, these people could be activated. Like rated supplement pilots who have been out of the cockpit for five years

or more, they would require thorough re-qualification training (though this training would be far less time-consuming and costly than starting from scratch). Overall, this system would allow the Air Force to maintain a smaller but highly capable force that is tailored to meet mid- and long-term commitments in an effective manner (Meilinger, 1998).

Along this line, the Air Force Reserve has an outstanding reputation for training its personnel. Civilian industry considers the Air Force Reserve a training ground for pilots, mechanics, and technicians of all types. The service need not feel uncomfortable about this situation, especially if it can call upon the product it trained at a later date, as described above.

Professional military education (PME) also needs rethinking. For some time, observers have commented on defects in the Air Force PME program--specifically, that it tends to emphasize the principles of management and administration to the detriment of war-fighting skills (Meilinger, 1998). In other words, PME is designed to help run a peacetime Air Force rather than educate warriors to fight and win future wars. This focus must change. Although the Air Force will always need highly trained technical experts, it will also need broadly educated generalists because most real-world problems are seldom simple or one-dimensional.

In terms of the Future Total Force and the EAF construct, officials warn that a transformed Air Force must be matched by a support structure that is equally agile, flexible and innovative. It must be a structure in which each of the Air Reserve Components can apply their talents to defend America – where they have the resources, information, tools, training, and freedom to perform (QDR, 2001).

And finally, The increased personnel and operations tempo experienced by the reserve forces in recent months needs to be carefully monitored to mitigate possible adverse consequences on reservists, their families, their employers and on future recruiting and retention. Careful and advance planning along with early notice to reservists and employers regarding the timing and length of AEF deployments should remain a primary goal of AFRC leadership. Families and employers must be encouraged to become more involved in air force reserve activities at the unit level. And lastly, AFRC must show greater appreciation to the families and employers of the ‘individual’ reservist.

In the following quote from Lieutenant General James E. Sherrard III, USAF, Chief of the Air Force Reserve in August 1999 indicates that there is much more work ahead for everyone in the Air Force Reserve Command.

“I think the future looks good but there are some pieces of it that we have to be careful about. Our key to success is our experience base. We like to recruit experienced people as they leave the active force but there are only so many for us to recruit. Therefore, the only option we’re going to have is to recruit from non-prior service people.

We have non-priors now who are fantastic assets for us but you have to build their experience base and that takes time and money. Also there’s a fine balance in terms of the size of the reserve component in relation to the active force. We’ll have to play that out based on the mission segments they ask us to do. The other big piece of the puzzle will come from the individual and the unit programs. In some areas the individual Reservist, or the IMA as we know them today, will be key because they often bring a unique specialty that you can focus on the duties of the active force. The active force needs this particular skill but they may not need it all the time, so the best way to do it is to have a member of the Reserve forces available to do the job. Because we can offer some unique contributions to the Total Air Force, we cannot let ourselves get trapped into a cookie cutter-approach. Not everybody fits the cookie cutter. We focus on every mission and get in there with our sleeves rolled up to provide the best capability, hopefully the best efficiency and least cost to the American taxpayer. But the key is that we provide the best tools for the Air Force to do its mission, whether we’re talking about an Air Force Reservist or an ANG member. Which tool they use is a decision

that needs to be made by the leadership standing there at that point in time. The beautiful part is that the capabilities and the abilities are the same across the Total Air Force. That's the key — and once we all understand it and know how to employ it, we'll always be number one" (Stanley, 1999).

### **Suggestions for Future Research**

It will continue to be exciting to see how the EAF construct plays out in the 21<sup>st</sup> Century. Future Air Force Institute of Technology students may choose to update this work by measuring the effectiveness of Air Force Reserve training and preparation in the Expeditionary Aerospace Force by specific airframes, or by specific air force specialty career fields. Additionally, the following question could be researched: Does the Air Force Reserve have the training systems in place today that can adapt to the changes required in the accelerated operational tempos of the future?

*"As we contend with the difficult challenges of the war on terrorism, we must also proceed on the path of transforming America's defense. Our commitment to the nation will be unwavering and our purpose clear: to provide for the safety and well being of all Americans and to honor America's commitments worldwide. As in generations before, the skill of our armed forces, their devotion to duty, and their willingness to sacrifice are at the core of our nation's strength. We must provide them with the resources and support that they need to safeguard peace and security not only for our generation but for generations to come" (QDR, 2001).*

*--Donald H. Rumsfeld  
Secretary of Defense*

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### **Abbreviations and Acronyms**

<b>ACC</b>	Air Combat Command
<b>ACS</b>	Agile Combat Support
<b>AEF</b>	Aerospace Expeditionary Force
<b>AEFC</b>	Aerospace Expeditionary Force Center
<b>AEG</b>	Aerospace Expeditionary Group
<b>AES</b>	Aerospace Expeditionary Squadron
<b>AETC</b>	Air Education and Training Command
<b>AEW</b>	Aerospace Expeditionary Wing
<b>AFDD</b>	Air Force Doctrine Document
<b>AFFOR</b>	Air Force forces
<b>AFI</b>	Air Force Instruction
<b>AFMAN</b>	Air Force Manual
<b>AFRC</b>	Air Force Reserve Command
<b>AFSC</b>	Air Force Specialty Code
<b>AFSPC</b>	Air Force Space Command
<b>AMC</b>	Air Mobility Command
<b>ANG</b>	Air National Guard
<b>AOR</b>	Area of responsibility
<b>ARC</b>	Air Reserve Component
<b>ASETF</b>	Aerospace Expeditionary Task Force
<b>ATSO</b>	Ability to Survive and Operate
<b>C2</b>	Command and Control
<b>CAF</b>	Combat Air Forces
<b>CINC</b>	Commander-in-Chief
<b>CJCS</b>	Chairman of the Joint Chiefs of Staff
<b>COMAFFOR</b>	Commander of Air Force Forces
<b>CONOPS</b>	Concept of Operations
<b>CONPLAN</b>	Operation plan in concept format; concept plan
<b>CONUS</b>	Continental United States
<b>CSC</b>	Combat Support Center
<b>DIRMOBFOR</b>	Director of Mobility Forces
<b>DOD</b>	Department of Defense
<b>DRMD</b>	Deployment Requirements Manning Document
<b>EAF</b>	Expeditionary Aerospace Force
<b>ECS</b>	Expeditionary Combat Support
<b>ECS IPT</b>	ECS Integrated Process Team
<b>FAM</b>	Functional area manager
<b>FOL</b>	Forward operating location
<b>GMFP</b>	Global Military Force Policy
<b>GRL</b>	Global Reach Laydown

**HQ**  
**HUMRO**

Headquarters  
Humanitarian relief operation

**JFACC**  
**JCS**  
**JFC**  
**JOPES**  
**JP**  
**JTF**  
**LD/HD**  
**LIMFACS**  
**LMW**

Joint Force Air Component Commander  
Joint Chiefs of Staff  
Joint Force Commander  
Joint Operation Planning and Execution System  
Joint Publication  
Joint Task Force  
Low Density/High Demand  
Limiting factors  
Lead mobility wing

**MAF**  
**MAJCOM**  
**MOG**  
**MST**

Mobility air forces  
Major command  
Maximum (aircraft) on ground  
Mission support team

**NAF**  
**NCA**  
**NIPRNET**

Numbered Air Force  
National Command Authorities  
Unclassified but Sensitive Internet Protocol Router  
Network

**OPCON**  
**OPLAN**

Operational control  
Operation Plan

**PERSCO**

Personnel support for contingency operations

**SECDEF**  
**SIPRNET**  
**SORTS**  
**SSC**

Secretary of Defense  
SECRET Internet Protocol Router Network  
Status of Resources and Training System  
Small Scale Contingency

**TACC**  
**TALCE**  
**TPFDD**

Tanker airlift control center  
Tanker airlift control element  
Time-phased force and deployment data

**USAF**  
**UTC**

United States Air Force  
Unit type code



## Terms

**Aerospace Expeditionary Force** Aerospace Expeditionary Forces (AEFs) are a composite organizations of aerospace capabilities from which a tailored ASETF, composed of AEWs, AEGs, and AESs, is created to provide forces to meet theater commander in chief (CINC) requirements. An AEF is not a discrete warfighting unit.

**Aerospace Expeditionary Group (AEG)** An AEG is an independent group assigned or attached to an ASETF or an in-place NAF by MAJCOM G-series orders. Normally, the ASETF or in-place NAF commander also exercises OPCON of AEGs. An AEG is composed of the group command element and one or more squadrons. The AEG, depending on the size and structure of the AEF, is the lowest command echelon of AEFs that may report directly to a COMAFFOR

**Aerospace Expeditionary Task Force (ASETf)** An ASETF is a tailored, task organized aerospace force presented to a joint force commander (JFC) consisting of a deployed NAF headquarters, or command echelon subordinate to a NAF headquarters, and assigned and attached operating forces (command element plus operating forces). An ASETF can be sized depending on the level and nature of the conflict and the size of the aerospace component required. The ASETF is commanded by the designated Commander, Air Force Forces (COMAFFOR) and is activated by MAJCOM G Series orders.

**Aerospace Expeditionary Wing (AEW)** An AEW is a wing or a wing slice assigned or attached to an ASETF or an in-place NAF by MAJCOM G-series orders. Normally, the ASETF or in-place NAF commander also exercises OPCON of AEWs. An AEW is composed of the wing command element and some groups. The AEW commander reports to a COMAFFOR.

**Agile Combat Support (ACS)** ACS underpins Global Engagement and provides the foundation for the other Air Force Core Competencies. It includes the processes with which the Air Force creates, sustains, and protects all aerospace capabilities to accomplish mission objectives across the spectrum of military operations. ACS supports the capabilities that distinguish aerospace power...speed, flexibility, and global perspective.

**Command and Control (DOD)** The exercise of authority and direction by a properly designated commander over assigned and attached forces in the accomplishment of the mission. Command and control functions are performed through an arrangement of personnel, equipment, communications, facilities, and procedures employed by a commander in planning, directing, coordinating, and controlling forces and operations in the accomplishment of the mission. Also called C2. (JP 1-02)

**Core UTC Package (CUP)** The Core UTC Package represents a linking of UTCs to meet a larger capability. Two types of CUPs include Aviation and Support. Aviation CUPs systematically bring together all required resources needed to sustain operations of a particular MDS at a standard location. Support CUPs represent capabilities ranging

from humanitarian missions to combat support requirements at generic location. Utilization of CUPs can facilitate the development of a TPFDD.

**Expeditionary Aerospace Force (EAF)** The EAF concept is how the Air Force will organize, train, equip, and sustain itself by creating a mindset and cultural state that embraces the unique characteristics of aerospace power – range, speed, flexibility, precision – to meet the national security challenges of the 21<sup>st</sup> Century.

**Expeditionary Combat Support (ECS)** The essential capabilities, functions, activities, and tasks necessary to sustain all elements of aviation and ground combat operations forces in a deployed location. It includes but is not limited to that support rendered by service forces in ensuring the aspects of supply, maintenance, transportation, health services, and other services required by units to accomplish their missions in combat. ECS functions include air traffic control and air field management, chaplain, civil engineer, communications and information, contracting, financial management and comptroller, historian, intelligence, judge advocate, logistics plans, maintenance and munitions, manpower, medical military equal opportunity, personnel, postal services, protocol, public affairs, safety, security forces, services, supply, transportation, and weather. ECS concepts assure that AEFs are supported and operate with a small support footprint and streamlined infrastructure requirements.

**Follow-On Combat Capability (FCC)** The point in the deployment where enough resources are available to maintain employment for 30 days.

**Force Package A** Force Package is the basic unit designator of a unit type code (UTC) and is used as a planning tool to tailor an AEF.

**Global Reach Laydown (GRL)** GRL refers to both the assets of and strategy for ensuring effective employment of a robust global air mobility support system. The backbone of GRL is the en route system, a worldwide network of personnel, material, equipment, and facilities providing command and control, logistics, maintenance, and aerial port services to air mobility forces. The system is flexible, capable of expanding or contracting according to operational requirements in peacetime, contingency, or war. It may expand to new locations to provide services, or increase the level of support at existing locations. Global Reach Laydown permits continuous global command and control of air mobility forces regardless of their location, providing commanders real-time information regarding the status of missions and assets, as well as the location and disposition of transported personnel and material cargo -- in-transit visibility (ITV).

**Joint Force Air Component Commander (DOD)** The joint force air component commander derives authority from the joint force commander who has the authority to exercise operational control, assign missions, direct coordination among subordinate commanders, redirect and organize forces to ensure unity of effort in the accomplishment of the overall mission. The joint force commander will normally designate a joint force air component commander. The joint force air component commander's responsibilities will be assigned by the joint force commander (normally these would include, but not be limited to, planning, coordination, allocation, and tasking based on the joint force commander's apportionment decision). Using the joint force commander's guidance and

authority, and in coordination with other Service component commanders and other assigned or supporting commanders, the joint force air component commander will recommend to the joint force commander apportionment of air sorties to various missions or geographic areas. Also called JFACC. (JP 1-02)

**Joint Force Commander (DOD)** A general term applied to a combatant commander, subunified commander, or joint task force commander authorized to exercise combatant command (command authority) or operational control over a joint force. Also called JFC. (JP 1-02)

**Lead Unit** MAJCOMs will designate a lead unit when the forces placed on call come from more than one location. The Lead Unit works closely with the parent MAJCOM who directs the planning and coordination efforts of designated AEF units to determine operational, logistics, and support requirements to meet mission objectives.

**Limiting Factor (DOD)** A factor or condition that, either temporarily or permanently, impedes mission accomplishment. Illustrative examples are transportation network deficiencies, lack of in-place facilities, malpositioned forces or materiel, extreme climatic conditions, distance, transit or overflight rights, political conditions, etc. (JP 1-02)

**Maximum (aircraft) on the Ground (MOG)** The maximum number of aircraft that can be accommodated at one time at a specific location due to limitations of ramp space, servicing capabilities, cargo handling, or other considerations.

**Mission Support Teams (MSTs)** MSTs are smaller TALCE-like organizations that are generally capable of the same support TALCEs provide, only on a much smaller scale. They are generally led by a non-commissioned officer and provide a level of C2, aerial port, and maintenance services capable of supporting MOG of one aircraft.

**On Call Status** A posture assumed by units designated by MAJCOMs allowing units to rapidly transition from normal day-to-day operations to AEF operations. This posture is established before receipt of a CJCS Alert Order

**Pre-Positioning** Pre-positioning refers to movements that take place prior to receipt of a CJCS Warning/Alert Order. Pre-positioning normally refers to equipment and supplies. *Exception:* The HQ AMC TACC commander may (pre)position air refueling forces (aircraft and crews) in anticipation of a Warning/Alert Order. Depending on the nature of the contingency, this will facilitate the timely movement of other positioning/deploying forces.

**Positioning** Positioning refers to movements that take place after receipt of a Warning/Alert Order but prior to the Execute Order. Positioning normally refers to aircraft, aircrews, and MSTs.

**Rainbowed Equipment** Non-prepositioned equipment that is sourced from multiple units, left in place, and utilized by multiple units over time to enable the best support of vulnerable AEFs while minimizing home station impact on supporting units (Equipment working group, ECS Conference)

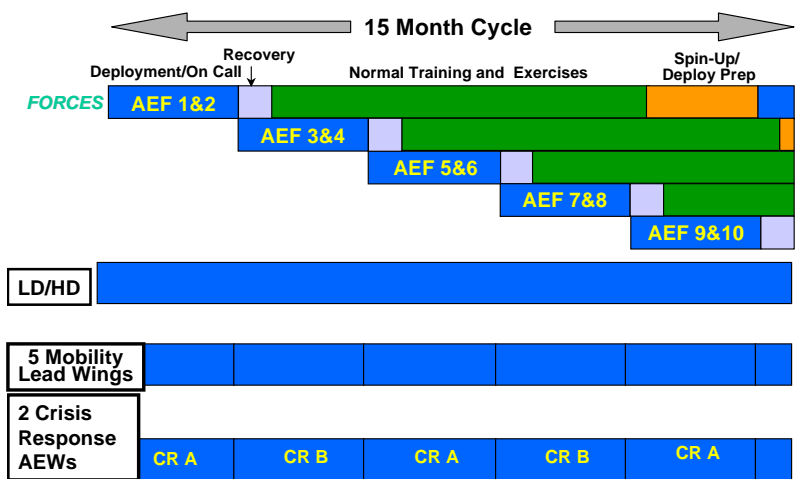
**Reachback** The process of obtaining products, services, and applications or forces, equipment, or materiel from Air Force organizations that are not forward deployed (AFDD 2, AFDD 1-2). This capability allows commanders to obtain or coordinate support from units not physically located with the forward force. By leveraging advances in communications technology, reachback capabilities make it possible to utilize CONUS and/or rear-based assets and organizations to perform various functions in support of AEF operations. Effective use of reachback will reduce the number of personnel and amount of equipment which deploys to the AOR, reduce airlift and support requirements, and will positively impact a commander's ability to protect the deployed force. Reachback is predicated on global communications, rapid global mobility, and time-definite resupply capabilities.

**Reachbetween** Reachbetween, or en route communication, provides services and capabilities to ensure continuous command and control and information support for deploying forces. For deploying forces, en route communication starts upon departure from garrison field and continues until arrival in the AOR or at the FOL. For power projection and supporting missions, en route communication starts upon departure from garrison or FOL and continues until return to the respective recovery base. The goal of en route communication is to provide timely information updates for improved situational awareness and command and control from deployment to employment.

**Time-phased force and deployment data (TPFDD)** (DOD) The Joint Operation Planning and Execution System data base data base portion of an operation plan; it contains time-phased force data, non-unit-related cargo and personnel data, and movement data for the operational plan, including: (a) in-place units, (b) units to be deployed to support the operation plan with a priority indicating the desired sequence for their arrival at the port of debarkation, (c) routing of forces to be deployed, (d) movement data associated with deploying forces, (e) estimates of non-unit-related cargo and personnel movements to be conducted concurrently with the deployment of forces, and (f) estimate of transportation requirements that must be fulfilled by common-user lift resources as well as those requirements that can be fulfilled by assigned or attached transportation resources. (JP 1-02)

**Task Force** (DOD, NATO) 1. A temporary grouping of units, under one commander, formed for the purpose of carrying out a specific operation or mission. 2. Semi-permanent organization of units, under one commander, formed for the purpose of carrying out a continuing specific task. (JP 1-02)

# AEF Rotations



**Figure 1. 15-month AEF Rotational Cycle**

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